

# A revision of the Mygalomorph spider genus *Encyocrypta* Simon in New Caledonia (Araneae Barychelidae)

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## ABSTRACT

The barychelid genus *Encyocrypta* is revised and restricted to New Caledonia. It now includes 22 species, 21 of which are new: *E. meleagris* Simon, 1889, *E. aureco* n. sp., *E. berlandi* n. sp., *E. cagou* n. sp., *E. colemani* n. sp., *E. decooki* n. sp., *E. djiaouma* n. sp., *E. enesseff* n. sp., *E. koghi* n. sp., *E. kone* n. sp., *E. kottae* n. sp., *E. kritscheri* n. sp., *E. leto-*

*carti* n. sp., *E. lugubris* n. sp., *E. montdo* n. sp., *E. montiou* n. sp., *E. neocaledonica* n. sp., *E. niaouli* n. sp., *E. oubatche* n. sp., *E. panie* n. sp., *E. tindia* n. sp., *E. tillieri* n. sp. A lectotype for *Encyocrypta meleagris* Simon is designated. Brief biological and biogeographic notes are given.

## RÉSUMÉ

Le genre *Encyocrypta* est révisé et restreint aux espèces de Nouvelle-Calédonie. Il contient 22 espèces, dont 21 sont nouvelles: *E. meleagris* Simon, 1889, *E. aureco* n. sp., *E. berlandi* n. sp., *E. cagou* n. sp., *E. colemani* n. sp., *E. decooki* n. sp., *E. djiaouma* n. sp., *E. enesseff* n. sp., *E. koghi* n. sp., *E. kone* n. sp., *E. kottae* n. sp., *E. kritscheri* n. sp., *E. leto-*

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The New Caledonian spider fauna is a diverse, little explored resource and the mygalomorphs have received little attention. The first mygalomorph spider collections from the island group were those described by SIMON (1889), consisting of seven new species in four new genera. Included among those were three new mygalomorphs. The diplurid, *Macrothele silvicola*, was transferred to *Stenygrocercus* (Simon, 1892) and later revised by RAVEN (1981, 1984). The other two mygalomorphs were placed in the Barychelidae and indeed it is to New Caledonia that the type genus, *Barycheilus*, of that rich and diverse family is endemic. The second genus, *Encyocrypta*, has had a varied history. It was erected by SIMON (1889) but later (SIMON, 1892) placed in the synonymy of the Australian genus *Idiommata* Ausserer, 1871. Other authors (HOGG, 1902; POCKOCK, 1895, 1898) subsequently restored *Encyocrypta* and included species from Pelew Island,

Australia, New Britain, and New Guinea. Nevertheless, SIMON (1903) continued to leave the genus in synonymy. Cataloguers also varied. RAINBOW (1912) restored *Encyocrypta* but ROEWER (1942) and BONNET (1956) left it in the synonymy of *Idiommata*. MAIN (1954), by including a new Australian species, *E. parifusca* Main, implicitly restored the genus (BRIGNOLI, 1983). That, however, was not noted by KRITSCHER (1966) who examined fresh material of *Encyocrypta* (listed as *Idiommata*) here described as new species. MAIN (1982) touched briefly upon the question of the status of *Encyocrypta* and subsequently (MAIN, 1985) transferred *E. parifusca* to *Synothele* but continued to recognise *Encyocrypta*, as did RAVEN (1985).

A second and major collection of spiders, including mygalomorphs, was that of SARASIN and ROUX. That collection was studied by BERLAND (1924) who described the first migid from

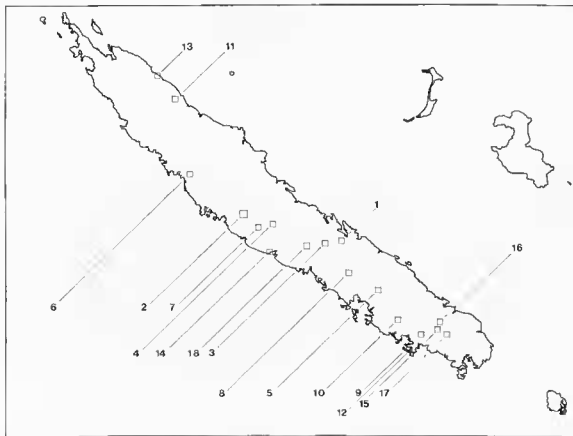


FIG. 1. - *Encyocrypta* type localities. Index of type localities: 1 Canala; 2 Col de Boa; 3 Col d'Amieu; 4 Col des Roussettes; 5 Dent de St Vincent; 6 Koné; 7 Mt Djaouma; 8 Mt Do; 9 Mts Koghis; 10 Mt Mou; 11 Mt Panié; 12 Nouméa; 13 Oubatehe; 14 Plage de la Roche Percée; 15 Rivière Blanche; 16 Rivière Bleue; 17 Rivière des Pirogues; 18 Rivière de Tindia.

Pacific islands, *Migas affinis*, as well as one other species of *Barychelus*. The collection contained further material of *Stenogrocerus silvicola* that was later transferred to a new species, *S. annulata* RAVEN (1981). RAVEN (1985), in revising mygalomorph genera of the world, restored the genus *Encyocrypta* and included in it species from Australia, New Guinea, the western Pacific and New Caledonia. Clearly, pending revisionary studies on Australian and other Pacific species placed in *Encyocrypta* have awaited this clarification of species from New Caledonia.

Apart from those studies, research on New Caledonian mygalomorphs has been almost untouched. This study is based upon collections made with the much appreciated cooperation of ORSTOM Noumea, and especially Dr Jean CHAZEAU, also of Dr Simon and A. TILLIER, Muséum national d'Histoire naturelle, Paris. A National Science Foundation grant to Dr N. I. PLATNICK (American Museum of Natural History, New York, AMNH), in association with Queensland Museum (QMB) funds, and an Australian Research Committee grant to the senior author, were also gratefully used to make these collections.

#### MATERIALS AND METHODS

**Diagnosis** : these are the most informative characters evident in this study. Where numbers of maxillary cuspules are used in identification, the mean for each specimen, i.e. using the left and right maxillae, should be used.

**Description** : eyes are abbreviated as follows : AME, anterior median eyes ; ALE, anterior lateral eyes ; PME, posterior median eyes ; PLE, posterior lateral eyes ; MOQ, median ocular quadrangle. All measurements are in millimeters, except eye measurements which are given as the integral number of ocular units (0.02 mm), or interspaces which are expressed as diameters of an AME. Abbreviations and terms are standard for the Araneae, except that in spine counts the letter « w », for weak, follows counts of spines that are thicker than setae but hardly qualify as spines. Scopula statements give extent (full, distal one-sixth) of scopula hair along the article of the leg, its density (thin, sparse hairs), and whether the scopula is divided by setae that are different

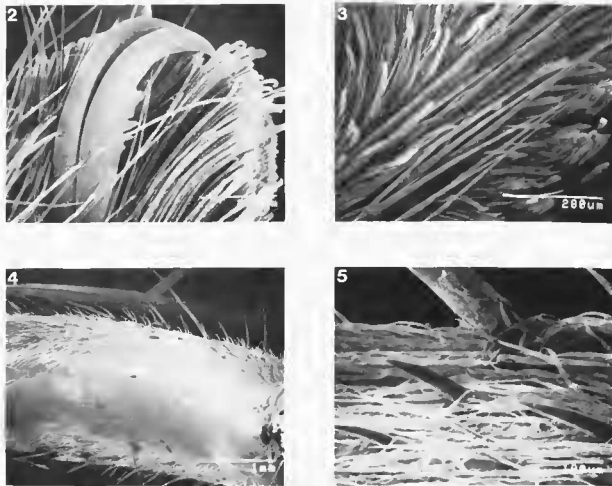
in appearance to scopula hairs, and the approximate number of setae across the band (fig. 3). In males, paired claws may have one or two rows of teeth. The indication of two rows is the presence of teeth on outer faces of claws (fig. 2). Spinnerets are abbreviated as PMS (posterior median spinnerets) and PLS (posterior lateral spinnerets). Figures are drawn from the dorsal left leg or palp as viewed prolaterally except when the limb on that side is damaged or absent. Palpal bulbs of the same species drawn from the same view can look very different because the basal haematodocha can be in different states of distension. Hence, views given here are those that best show the diagnostic structure. In comparisons with figures, bulbs should be similarly oriented.

**Basifemoral thorn setae** : (figs 4-5) are short thorn-like setae found basally on the prolateral surface of femora I, II and III, and retrolaterally on femora IV. They differ from spines and other setae or bristles in lacking characteristic deep ribbing and instead are almost smooth with broad irregular longitudinal fluting.

**Institutional acronyms** : AMNH, American Museum of Natural History ; QMB, Queensland Museum, Brisbane ; AMS, Australian Museum, Sydney ; MNHN, Muséum national d'Histoire naturelle, Paris ; NHMV, Naturhistorische Museum, Wien ; NHB, Naturhistorische Museum, Bäle ; BMNH, British Museum (Natural History), London.

#### DISCUSSION

The taxonomy of *Encyocrypta* in New Caledonia presents a number of difficulties that may indicate that interspecific differences are smaller than normal, i.e. species have been overly « split ». At several sites, two species of *Encyocrypta* are found and often only a few individuals of each are available and most of those are immature and hence of little value. That problem became more acute because of SIMON's well known habit of combining tubes of specimens (including types) from different localities that he once considered different species. That served to exacerbate the normally straightforward task of diagnosing identified species using new topotypic material. Collections with good series of females



FIGS 2-5. *Encyocrypta aureco*, scanning electron micrographs. 2, 3: holotype ♂, leg IV; paired claws, dorsal view showing teeth on outer face and surrounding claw tuft (2); tarsus, ventral view, showing setae (middle) dividing scopula (above and below) (3); 4, 5: immature ♀, femur I, prolateral face, basifemoral thorn setae (upper edge) emerging from pile beside spine; low magnification showing line of thorn setae (4); high magnification, thorn setae beside true spine, showing difference in microstructures.

from Rivière Bleue and Mt Panié therefore take on additional significance as «standards» of variation. Also, where both males and females of a species are known, apparently minor differences in females correlate strongly with known significant differences in males. That, coupled with a concurrent study of Australian barychelids (RAVEN & CHURCHILL, in prep.) and of New Caledonian *Stenyrocercus* (RAVEN, this volume), reduces concerns about remarkable diversity of species in New Caledonia — almost every mountain has a distinct pair of species.

#### Biogeography and habitats

At present, definitive statements about the biogeography of *Encyocrypta* on New Caledonia are not readily defensible because males of too few species are known. Males present considerably more information than females in the structure of the palpal bulb, tibial spur, and claw dentition. However, as noted above, most mountain tops have a different species pair, and some mountains also show altitudinal zonation. For example, at Mt Do, species at high altitudes differ from those collected only 400 m lower. Certainly, at Mt Panié, the altitudinal gradient



of taxa was most noticeable with members of the Migidae, Dipluridae, and Barychelidae.

*Encyocrypta* species on New Caledonia are known from three different habitat types: rainforest, montane forest, and beach margins. The following is a description of the habitats of several localities of *Encyocrypta* collections. Vegetative terminology follows that of WEBB (1968).

*Rivière Bleue* (cf. BONNET DE LARBOGNE *et al.*, this volume). The first lowland rainforest type at Rivière Bleue is a tropical riverine mesophyll forest, subjected to seasonal river flooding. It is dominated by tall trees of various families (Araliaceae, Casuarinaceae, Fagaceae, Rutaceae, Rhamnaceae) with a sparse understorey that included palms (Araceae), treeferns (Cytaceae), Pandani (Pandanaeae), and members of the Flagellariaceae. Woody lianas and vines are few and the canopy is discontinuous, thus allowing a reasonable light penetration to the floor. The litter is large-leaved and shows evidence of flooding with red soil coating the litter and logs. The *Encyocrypta* found here built short tubes often lined by a layer of silk with two flimsy doors a) under and in fallen logs, or b) in crumbly soil under moderately dense litter. The second rainforest type here is on the slopes, adjacent to the riverine forest. This sub-montane forest has a lower canopy, with moss covering logs and granite rocks on the forest floor. Drainage is better, the soil similar, yet the litter is not congealed by silt, as in the alluvial forest. *Encyocrypta* burrows with flimsy hinged doors were present in the moss pads at the base of trees and palms.

*Plage de la Roche Percée*. On the western coastline, two beaches are separated by a prominent rocky point. The northern beach is surrounded by a coastal forest with conspicuous *Araucaria columnaris* emergents. Forest fringes are dominated by *Pandanus* sp. and *Ipomea* sp. *Encyocrypta kottae* was found in the sandstone-conglomerate banks at the beach front.

*Mt Panié*. Climbing up to this 1600 m high mountain, the vegetation undergoes dramatic changes in composition from a dry *Leptospermum* dominated heathland and open stunted *Melaleuca* woodland, to a tall tropical lowland mesophyll vine and palm forest where woody lianas and epiphytes were common. From about 500 m the forest becomes lower, more open and wind swept, with only some rainforest elements remaining. On crossing ridges and descending into protected saddles the vegetation is taller and wetter with palms dominating. The first mygalomorph (Barychelidae) was collected at approximately 900 metres. From 1100 metres a montane *Agathis montana* (Araucariaceae) mossy forest dominates, with *Richea* and *Pteridium* common. Persistent rain and mist ensured that a rich and moist moss, *Polytrichum*, and a lycodium covered almost everything. The soil was clay-rich with many rocks of white quartzite. *Encyocrypta* was collected at the bases of *A. montana*, or on fallen logs, that were covered in a thick layer of moss. The burrow doors were a hinged, soil and moss combination that opened on top of the moss. *Encyocrypta* were sometimes in burrows under bark with moss overlain.

## Family BARYCHELIDAE

### Genus *ENCYOCRYPTA* Simon

*Encyocrypta* Simon, 1889: 247. Type species by monotypy, *Encyocrypta meleagris* Simon, 1889. *Encyocrypta* Rainbow, 1911: 114. *Encyocrypta* Roewer, 1942: 215. *Encyocrypta* Bonnet, 1956: 1655. *Encyocrypta* Main, 1982: 588; 1985: 12. *Encyocrypta* Brignoli, 1983: 130. *Encyocrypta* Raven, 1985: 152. *Encyocrypta* Platnick, 1989: 93.

**Diagnosis:** *Encyocrypta* differs from the Australian genus *Idiomnata* in lacking a maxillary lyra, and lacking dense pads of silver hairs on the

the carapace of males, and also in not building a defined almost rigid silken side chamber as part of its burrow.

**Description:** carapace rounded, hirsute. Fovea short, straight to slightly procurved. Clypeus absent. Eyes on tubercle in 3 rows. Rastellum present or absent. Lyra absent. Maxillae with 1-30 cuspules grouped on inner corner, heel slightly procurved, anterior lobes rounded. Ras-

tellum weak to absent. Labium wider than long, without cuspules. Sternum cordate, always clearly longer than wide, 3 pairs of round marginal sigilla. Females with few spines on legs I and II. Scopula entire on metatarsi and tarsi I and II; thin and divided by setae, if present, on metatarsi III and IV. Paired claws of males with two rows of teeth on leg I, one or two rows on claws of leg IV. Preening combs present or absent in males and females on metatarsi III and IV. Dorsal and ventral abdomen usually mottled, rarely uniform in colour. Tibia I of males with ventral distal spur and often with up-curved megaspine with small process opposed by slender down-curved megaspine laterally. Palpal bulb pyriform with short distal keel on embolus. Spermathecae of females consist of one or two pairs of dimorphic lobes arising from separated basal mounds. Four spinnerets; width of posterior median spinnerets at least 0.25 of that of posterior laterals.

**Species included** (22): *E. meleagris* Simon, 1889; *E. aureco* n. sp.; *E. berlandi* n. sp.; *E.*

*cagou* n. sp.; *E. colemani* n. sp.; *E. decooki* n. sp.; *E. djaouma* n. sp.; *E. enesseff* n. sp.; *E. koghi* n. sp.; *E. kone* n. sp.; *E. kottae* n. sp.; *E. kritscheri* n. sp.; *E. letocarti* n. sp.; *E. lugubris* n. sp.; *E. montido* n. sp.; *E. montinou* n. sp.; *E. neocaledonica* n. sp.; *E. niouli* n. sp.; *E. oubatche* n. sp.; *E. panie* n. sp.; *E. tillieri* n. sp.; *E. tindia* n. sp.

**Remarks:** Australian and other species formerly placed in *Encyocrypta* are the subject of a current revision (RAVEN, in prep.) and will be placed in a new genus. Of the two genera, Australian species retain a wide sternum, parsimoniously plesiomorphic for the family and as further indicated by spiderlings and juveniles, in contrast to the longer sternum of *Encyocrypta*. Female *Encyocrypta* have retained a plesiomorphic unmodified transverse straight fovea but in Australian species the fovea is distinctly procurved.

#### Key to known males of New Caledonian *Encyocrypta*

1. Megaspine absent from the anterolateral surface of tibia I . . . . . 2
- Megaspine present on the anterolateral surface of tibia I (fig. 16) . . . . . 5
2. Apical embolus finely grooved (fig. 68) . . . . . *E. koghi*
- Apical embolus without grooves (fig. 72) or with only one distinct keel (fig. 17) . . . . . 3
3. Eye group much longer than wide (fig. 70) . . . . . *E. kone*
- Eye group subquadrate (fig. 13) . . . . . 4
4. Paired claws of leg IV with two rows of teeth (e.g. fig. 2); preening combs present . . . . . *E. neocaledonica*
- Paired claws of leg IV with single row of teeth; preening combs absent . . . . . *E. panie*
5. Leg IV with teeth on both lateral faces of each paired claw (e.g. fig. 2) . . . . . *E. kritscheri*
- Leg IV with teeth on one medial keel of each paired claw . . . . . 6
6. Process on anterolateral surface of tibia I distinct; associated megaspine only up to 3 times longer than basal width (fig. 16) . . . . . 7
- Process on anterolateral surface of tibia I indistinct or absent; associated megaspine several times longer than wide (fig. 96) . . . . . *E. letocarti*
7. Process on anterolateral tibia I short, associated megaspine shorter and triangular (fig. 16) . . . . . *E. aureco*

- Process on anterolateral tibia I thumb-like, associated megaspine longer than process (fig. 60) ..... *E. eneseff*

**Key to known females of New Caledonian *Encyocrypta***

1. Basifemoral thorn setae present (figs 4, 5) ..... 2  
 — Basifemoral thorn setae absent ..... 5
2. Maxillary cuspules average less than 13 per specimen ..... 3  
 — Maxillary cuspules average more than 13 per specimen ... *E. lugubris*
3. Scopula present on metatarsi IV ..... 4  
 — No scopula on metatarsi IV ..... *E. montdo*
4. Spermathecae with long slender sinuous outer lobe (fig. 42); scopula only in distal third of metatarsi III ..... *E. decooki*  
 — Spermathecae with short apically divided outer lobe (fig. 82); scopula in distal half of metatarsi III ..... *E. kottae*
5. Legs with darker annulations ..... 6  
 — Legs without annulations ..... 8
6. Scopula present on metatarsi IV ..... 7  
 — No scopula on metatarsi IV ..... *E. oubatche*
7. Maxillary cuspules average less than 13 per specimen ..... *E. cagou*  
 — Maxillary cuspules average more than 13 per specimen ... *E. niadouli*
8. Scopula absent on metatarsi IV ..... 9  
 — Scopula present on metatarsi IV ..... 11
9. Maxillary cuspules average more than 13 per specimen ..... 10  
 — Maxillary cuspules average less than 13 per specimen ... *E. djiaouma*
10. Outer lobe of spermathecae short, tip not extending anterior to inner lobe (fig. 164); AME-AME about equal to ALE-ALE (fig. 157) ... *E. panie*  
 — Outer lobe of spermathecae long, tip clearly extends anterior to inner lobe (fig. 127); AME-AME much less than ALE-ALE (fig. 121) ... *E. montmou*
11. Maxillary cuspules average more than 13 per specimen ..... 12  
 — Maxillary cuspules average less than 13 per specimen ..... 15
12. Spermathecae with short straight outer lobe without apical expansion (fig. 169) ..... *E. tindia*  
 — Spermathecae with long outer lobe or outer lobe apically enlarged (figs 10, 177) ..... 13
13. Anterior edges of AME very close to posterior edges of ALE (fig. 172); outer lobes of spermathecae broad, with slight apical expansion (fig. 177) ..... *E. tillieri*  
 — Anterior edges of AME remote from posterior edges of ALE (fig. 19); outer lobes of spermathecae slender or with distinct apical expansion (figs 10, 24) ..... 14
14. Outer lobes of spermathecae broad, with apical expansion almost mushroom shaped (fig. 24) ..... *E. berlandi*

- Outer lobes of spermathecae slender, with rounded apical expansion (fig. 10) ..... *E. meleagris*
15. AME-AME about equal to ALE-ALE (fig. 100); abdomen dorsally mottled brown (fig. 103) ..... *E. letocarti*
- AME-AME much less than ALE-ALE (fig. 33); abdomen dorsally white with slight brown mottling (fig. 36) ..... *E. colemani*

*Encyocrypta meleagris* Simon, 1889

(figs 1 & 6-11; table 1)

*Encyocrypta meleagris* Simon, 1889 : 247.

**Type material** : lectotype ♀, here designated : "Nouméa" (coll. DUPUIS), MNHN 4.669; 2 paralectotypes ♀ : same data. 1 paralectotype ♀ : listed under *E. cagou*. 1 paralectotype : "Canala", not located.

**Diagnosis** : differs from the sympatric but rarer *E. cagou* by the legs lacking annulations and by having 15-30 maxillary cuspules. Maxillae with more than 13 cuspules on average of both.

Females. Paired claws of leg IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula for distal 1/6 of metatarsi IV; distal 1/3 of metatarsi III. Abdomen dorsally with fine white spots forming no pattern; ventrally brown. Legs without distinct darker annulations. Spermathecae of four lobes; outer lobes slender, sinuous, inner lobes each a broad mound medially confluent. Male palpal bulb pyriform with low but distinct keel for distal half of terminal portion of bulb (fig. 11).

**Description** : lectotype ♀. Carapace 7.11 long, 6.71 wide. Abdomen 9.34 long, 7.89 wide. Total length, 20. Colour in alcohol : carapace, chelicerae, and legs reddish brown; carapace with reticulated markings on interstitial ridges on caput. Abdomen dorsally with reticulate pattern of fine white spots in broken chevrons; ventrally primarily brown with white between pale yellow posterior booklungs.

Carapace. Covered with black bristles and fine black hairs; numerous foveal bristles from deep in fovea; about 10 bristles between AME and 8-10 between PME.

Eyes. Occupy 0.32 of head-width. Tubercle low, distinct. Ratio of AME : ALE : PME : PLE, 24 : 25 : 16 : 23. MOQ front : back, 55 : 60 : 42;

MOQ back/front, 1.09, back/long, 1.43. Back row slightly procurved. Eye group front width : back width : length, 70 : 91 : 69; eye group 1.30 wider behind than long. Eye interspaces (as AME diameters) : AME-AME, 0.5, AME-ALE, 1.0, ALE-ALE, 1.3, ALE-PLE, 1.0, PME-PLE, 0.2, PME-PME, 1.4.

Chelicerae. Rastellum only long curved bristles. Promargin with 7 large and 6 small teeth; basomesally with 8 granules. Labium 0.56 long, 1.12 wide. Labiosternal suture is two broad contiguous sigilla. Maxillae 1.85 long in front, 2.26 long behind, 1.18 wide; with 15-20 cuspules on inner corner. Sternum 3.24 long, 2.94 wide. All sigilla oval, marginal; margins with thick and fine bristles.

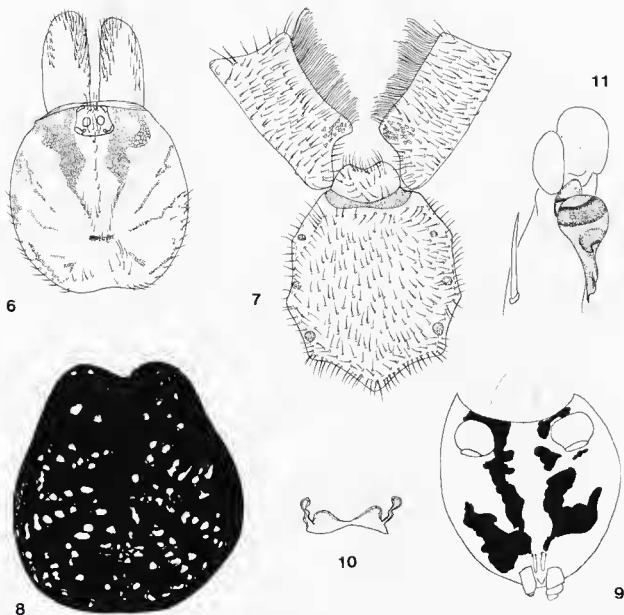
Legs. 4123. Prolateral coxae with thin bristles. Scopula. Metatarsi : I, II, entire, in distal three-quarters; metatarsi III, two thin triangles in distal third; IV, two small triangles in distal one sixth. Tarsi : I, II, entire; III, divided by setal band 3-4 wide; IV, setal band 6-8 wide. Claws. Paired claws of leg I with one large distal tooth and 2 smaller basal; leg IV with only one large tooth; palpal claw bare.

TABLE 1. Leg measurements of *Encyocrypta meleagris*, lectotype ♀

	I	II	III	IV	Palp
Femur	4.44	3.95	3.82	5.46	3.62
Patella	3.29	2.96	2.50	3.09	2.37
Tibia	2.83	2.57	2.37	3.95	2.41
Metatarsus	2.04	2.11	2.63	4.80	
Tarsus	1.25	1.51	1.45	1.78	2.11
Total	13.55	13.10	12.77	19.08	10.21

Spines. Leg 1 : fe p1 d7, pa p0, ti 0, me 0. Leg 2 : fe p1 d1, pa 0, ti 0, me v1. Leg 3 : fe p1 d1 r2, pa p2 r1, ti p2, r2, v8, me p4 r2 v5. Leg 4 : fe p1 d5 r1, pa rl, ti p2 r3 v6, me p1 r3 v9. Palp : fe p1 d6, pa 0, ti p1 v0. Preening combs on metatarsi : I each of 2-3 teeth retrolaterally on III, IV.

Trichobothria. Tibia about 9 in each of 2 rows for half its length; metatarsi with curving row of



FIGS 6-11. — *Encycrypta meleagris* Simon, 1889, lectotype ♀. 8-10: ♂, Rivière Bleue, 11, 6: carapace and chelicerae, dorsal view; 7: sternum, maxillae, and labium, ventral view; 8, 9: abdomen, dorsal view (8), ventral view (9); 10: spermathecae, ventral view; 11: cymbium and palpal bulb, ventral view (MNHN, Rivière Bleue).

about 15; tarsi with 20-30 filiform, no clavate evident.

Spinnerets. PMS 0.40 long, 0.18 wide, 0.16 apart. Basal, middle, apical, and total articles of PLS 1.10, 0.42, 0.34, 1.86 long, respectively. PLS/PMS width 0.21.

Spermathecae. Four lobes; outer lobes slender

sinuous, inner lobes each a broad mound medially confluent.

**Distribution and habitat:** *E. meleagris* is known only from rainforest at Rivière Bleue. Females were common in leaf litter, especially in areas on slopes and away from the flood plain of

the river. Some females and juveniles were found wandering free. However, a number of females were in thin silken sacs only slightly larger than the spider and attached to the underside of leaves. Doors, if present, were ill-defined and of similar thickness to the rest of the sac. Presumably, the sacs are temporary resting cells like those built by hunting Araneomorphae, e.g. *Miturga* (Miturgidae).

**Remarks:** females from Rivière Bleue are very similar to the lectotype and hence, the type locality « Nouméa » is considered to include those lowland forests. One male from Rivière Bleue which agrees with *E. meleagris* lacks both left and right first leg and is not described. However, its palp is figured (fig. 11).

BERLAND (1924) listed material of *E. meleagris* (as *Idiomnata*) from Tchabalabel, Oubatche, Mt Panié (500 m), Koné, Mt Canala (700 m), near Canala, Bourail, and Yaté and two different forms from « Thao » (= ? Tao), Vallée de Ngoi, and Mt Humboldt. Should a present search prove fruitful, that and extra material will be treated in a future revision. Judged by the endemicity observed herein, it is likely that all are distinct species.

**Notes on types:** Boc. 86 (MNHN) has a tube numbered 4.669. The tube contains six specimens. Three specimens are intact; two have abdomens separated, one legless carapace has no matching abdomen. A male and female also bearing the same number are separated and bear incorrect type designations placed by B. Y. MAIN (but not published); the female is *E. cagou*; the male has only two cuspules on the maxillae and is a new species, *E. neocaledonica*. SIMON (1889) had no males of *E. meleagris* but is well known to have added conspecific material to an existing vial which may or may not have included types. Of the other females there are two species: one is here placed in a new species *Encyocrypta cagou* and is represented by two females, one without an abdomen. Judging by size alone only one of the larger specimens could have been the one used by SIMON but he did mention two localities. The order on the label is Nouméa, Canala; whereas in the paper it is Canala (BOUGIER), Nouméa (DUPUIS). Only the measurements of the spider give enough specific information to eliminate the smaller specimens; the fact that he

doesn't mention leg annulations is further indication that he described the larger specimen which are more common in « Nouméa ». The other species is *E. meleagris*, represented by two intact females both with finely reticulated abdominal pattern, plus a third without abdomen and legs disconnected. The smallest has no annulations. It is mature but has very little ventral brown unlike the other two which are predominantly brown; it has same number of cuspules (20-25) as the other two. There is no certain knowledge that any of the specimens grouped by me above are from the one locality; at worst SIMON could have had two species at each locality! Measurements of the lectotype are substantially closer to those given by SIMON than any other specimens from the collection.

No indication of the syntype from Canala exists.

**Material examined:** 5 juv.: Rivière Bleue, litter, 27.X.1988 (A. & S. TILLIER), QM s 15488; 2 juv.: 27.X.1988 (D. HYNES), QM s 15487; 1 ♀: parc. 6, st 250c, alluvions, 160 m, 166°39'16" E, 22°06'13" S, 3.XI.1986 (A. & S. TILLIER), MNHN; 1 juv.: parc. 7, st 251h, alluvions, 170 m, 166°40'01" E, 22°05'59" S, 14.IV.1987 (A. & S. TILLIER), MNHN; 1 ♀: parc. 6, st 250 l, alluvions, 160 m, 166°39'16" E, 22°06'13" S, 13.VIII.1987 (A. & S. TILLIER), MNHN; 1 ♀: parc. 7, st 251b, 170 m, 166°40'01" E, 22°05'59" S, 13.X.1986 (A. & S. TILLIER), MNHN; 1 ♀: litter, 27.X.1988 (R. J. RAVEN), QM s 15491; 2 ♀, 1 juv.: Rivière Bleue, alluvions, in logs, soil, moss, 27.X.1988 (T. B. CHURCHILL), QM s 15492; 1 ♀: parc. 6, alluvions, 160 m, st 250a, 166°39'16" E, 22°06'13" S, 15.IX.1986 (Y. LETOCART, A. & S. TILLIER), MNHN; 1 ♀, 1 juv.: parc. 6, st 250g, alluvions, 160 m, 166°39'16" E, 22°06'13" S, 6.IV.1987 (A. & S. TILLIER), MNHN; 1 ♀: Rivière Bleue, alluvions, 27.X.1988 (R. J. RAVEN), QM s 15490; 2 ♀, 1 juv.: near Kaori Géant, 120 m, 25.V.1984 (G. MONTEITH & D. COOK), QM s 15472; 3 ♀: Rivière Bleue, alluvions, 27.X.1988 (R. J. RAVEN & T. B. CHURCHILL), QM s 15489; 1 ♂: parc. 6, st 250k, alluvions, 160 m, 166°39'16" E, 22°06'13" S, 7. VII.1987 (A. & S. TILLIER), MNHN. All in Rivière Bleue.

*Encyrcrypta aureco* n. sp.

(figs 1-5 &amp; 12-17; table 2)

**Type material :** holotype ♂, Col d'Amieu, wandering across rainforest bank at night, 25. v.1987 (R. J. RAVEN), QM s 7123.

**Diagnosis :** males. Tibia I with slender conical spur set back from end, upper process large, thumb-like with longer megaspines, both set at base of tibial spur. Palpal bulb with long slender shaft about half as long again as bulb; embolus short with small low twisted keel. Maxillae with less than 13 cuspules on average of both. Paired claws of leg IV with one row of teeth. Basifemoral thorn setae absent. Preening combs weak. Scopula in distal eighth of metatarsi IV; distal half of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs without annulations. ♀ unknown.

**Description :** holotype ♂ QM s 7123. Carapace 9.12 long, 7.68 wide. Abdomen 9.36 long, 6.00 wide. Total length, 21. Colour in alcohol. Carapace and legs orange brown, chelicerae darker. Abdomen dorsally brown with irregular white mottling concealed partially by dense pile of golden brown hair; ventrally brown with medial and two irregular transverse pallid bands. Legs not annulated. Sternum, maxillae, and chelicerae orange brown.

Carapace. With dense pile of silver bushy hairs on margins; pile of golden hairs on interstitial ridges obscure cuticle. Hair uniformly mixed with erect black setae, long on margins, short elsewhere, absent in striae. Fovea short, slightly recurved. Line of 8-10 anteromedial setae; no enlarged foveal pairs. Several long setae between PME and few long between ALE. Striae distinct. Clypeus absent.

Eyes. Tubercle distinct, projects in front of carapace. Group is 0.35 of head-width. Three rows; back row recurved. Eye group front width, back width, length, 65 : 74 : 59. MOQ front width, back width, length, 47 : 49 : 38. AME : ALE : PME : PLE, 24 : 25 : 15 : 20. AME-AME, 0.3, AME-ALE, 0.5, ALE-ALE, 1.0, PME-PLE, 0, PME-PME, 1.2, ALE-PLE, 1.0.

Chelicerae. Small, dorsally with long erect black setae mixed with silver brown hairs. Rastellum a cluster of erect curved setae on distal

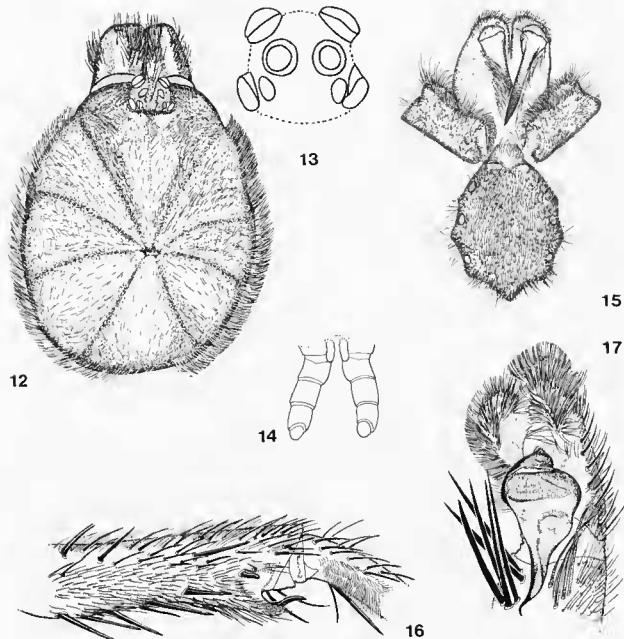
margin. Promargin with 9 large and 2 smaller teeth; 6 small orange (concolorous with furrow cuticle) teeth in row outside promargin. Intercheliceral tumescence small pallid, cuticle not evidently weaker. Labium 1.24 wide, 0.54 long. Short; labiosternal suture is two oval sigilla not medially confluent and lying in larger depression. Maxillae 2.52 long in front, 3.04 long behind, 1.20 wide; with about 7-9 thick cuspules on inner edge. Heel acute; anterior lobe distinct angular. Uniformly covered with long erect setae. Sternum 4.84 long, 3.80 wide. Posterior margins with thick black setae, elsewhere short, thinner. 6 distinct sigilla, all oval, marginal.

Legs. Femoral pile brown, elsewhere silver; pile obscures cuticle in parts. Leg IV slightly thicker than I. Tibia I with long curved spur and short, straight megaspine above which the cuticle is pallid; upper process apically rounded about twice as wide as long set against long triangular spine. Scopula. Generally dense, cuticle evident but not individual hair bases. Metatarsus : I full, entire; II, for 7/8ths, entire; III, thin, in distal half; IV, only 2 slender zones in distal eighth. Tarsus : I, II, full, entire, confluent with claw tufts; III, full, almost entire but for 2-3 setae; IV, full, dense, divided by setal band 3-4 setae wide. Claw tufts dense but do not enclose claws. Claws, 2 rows, each of 6-8 teeth, fewer on inner faces, set at mid-length and high on paired claws of leg I, 4 teeth in one row on outer faces of paired claws of leg IV. All claws equal in size.

Spines. Leg I, fe p2, d5, r4, pa p2, ti p2, v7 + megaspine, me v1; leg 2, fe p3, d6, r4, pa p1, ti p2, v8, me v1; leg 3, fe p5, d5, r4, pa p2, r2, ti p2, r2, v9, me p3, r3, v8; leg 4, fe p2, d6, r3, pa r1, ti p1, r4, v8, me p5, d1, r3, v11; palp, fe p1, d5, r1, pa p1, ti p1 v2. Metatarsal preening combs : 2 weak setae paired retroventrally on III; 4 weak setae retroventrally on IV.

TABLE 2 — Leg measurements of *Encyrcrypta aureco*, holotype ♂

	I	II	III	IV	Palp
Femur	7.94	7.46	7.14	9.05	4.92
Patella	4.44	4.29	3.81	3.65	3.09
Tibia	6.03	5.56	4.92	6.98	3.25
Metatarsus	5.71	5.87	6.51	9.52	—
Tarsus	3.02	3.17	2.86	3.49	2.00
Total	27.14	26.35	25.24	32.69	13.26



FIGS 12-17. — *Encycrypta aureco* n. sp., holotype ♂. 12: carapace and chelicerae, dorsal view; 13: eye group, dorsal view; 14: spinnerets, ventral view; 15: sternum, maxillae, labium, and chelicerae, ventral view; 16: tibia and metatarsus I, prolateral view; 17: palpal tibia, cymbium, and bulb, ventral view.

Trichobothria in two rows, each of 10-12 for three-quarters of tibiae; about 12 in strongly curving row (proximally retrolateral) on metatarsi; band of about 6-8 clavate and 30 filiform mixed with setae on tarsi.

Palp. Bulb pyriform; embolus origin gradual,

tip with long twisted keel; cymbial lobes slightly dimorphic.

Spinnerets. PMS 0.64 long, 0.28 wide, 0.24 apart, about 0.33 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 1.40, 0.60, 0.56, 2.56, respectively.



**Etymology** : the specific epithet is derived from the first two letters of Australian Research Council, from which source funds to collect material in this revision and complete the paper were granted to the senior author.

**Distribution and habitat** : known only from rainforest at Col d'Amieu where it was found wandering across a low embankment at night.

**Remarks** : *E. aureo* differs from *E. tindia* in the large triangular proateral apophysis on male tibia I and in lacking leg annulations.

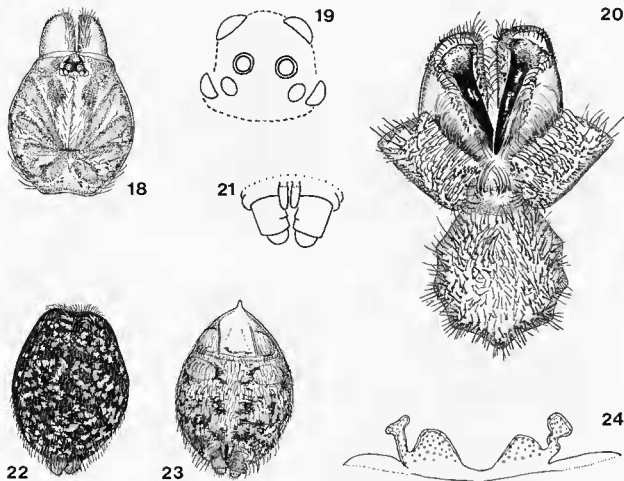
**Material examined** : only the type.

*Encyocrypta berlandi* n. sp.

(figs 1 & 18-24; table 3)

**Type material** : holotype ♀ : Col des Roussettes, forestry area, rainforest at 490 m, taken from sieved leaf litter, 29.v.1987 (R. J. RAVEN), QM S 4145.

**Diagnosis** : maxillae with more than 13 cuspsules on average of both. Females. Paired claws of leg IV without teeth. Basifemoral thorn setae absent; preening combs present. Scopula in distal fifth of metatarsi IV; distal half to third of metatarsi III. Abdomen dorsally with fine white



FIGS 18-24. — *Encyocrypta berlandi* n. sp., holotype ♀. 18 : carapace and chelicerae, dorsal view; 19 : eye group, dorsal view; 20 : sternum, maxillae, labum, and chelicerae, ventral view; 21 : spinnerets, ventral view; 22, 23 : abdomen, dorsal view (22), ventral view (23); 24 : spermathecae, ventral view.

spots forming vague herring-bone pattern. Legs without annulations. Spermathecae two, each a raised mound with short, slender sinuous lateral lobe with spherical apex. ♂ unknown.

**Description** : holotype ♀. Carapace 4.50 long, 3.92 wide. Abdomen 4.83 long, 3.57 wide. Total length, 12. Colour in alcohol. Carapace light brown with brown areas on lateral caput, lateral margins and brown reticulations on interstitial ridges, chelicerae dark brown, and legs yellow brown. Abdomen dorsally brown with fine white mottling forming faint herring-bone effect posteriorly; ventrally pallid with large brown areas between posterior booklungs, centrally and in front of posterior spinnerets.

Carapace. Bristle numbers and positions : few fine black hairs on lateral margins, caput, and in lines on interstitial ridges; 4-5 thick erect black bristles beside posterior striae, few small bristles on posterior side of anterior striae, 12 thick and several fine bristles anteromedially and band of strong but shorter bristles lateral of that; four pairs of foveal bristles; 6-8 thick and several finer bristles between PME and also between ALE; anterior striae glabrous, wide, distinct, others narrow, setose indistinct. Fovea straight to very slightly procurved.

Eyes. Tubercle low. Group is 0.29 of head-width. Back row slightly recurved. Eye group front width, back width, length, 42 : 57 : 42. MOQ front width, back width, length, 28 : 37 : 21. AME : ALE : PME : PLE, 9 : 14 : 6 : 13. AME-AME, 1.1, AME-ALE, 1.4, ALE-ALE, 2.0, PME-PLE, 0.2, PME-PME, 2.6, ALE-PLE, 2.3.

Chelicerae. Short, stout; clothed with narrow band of moderately long and few short black bristles, laterally a glabrous band and indistinct setose band. Rastellum a low mound with several short strong curved bristles. Furrow promargin with 1 small and 10 large spaced teeth, basomedially with 1 small tooth and about 10 granules.

Labium 0.88 wide, 0.42 long. Labiosternal suture a narrow groove of two separate sigilla, medially very narrow. Maxillae 1.33 long in front, 1.88 long behind, 0.83 wide; with about 12-17 cuspules in inner angle. Heel slightly produced, rounded; anterior lobe indistinct but groove long. Sternum 2.42 long, 2.21 wide. Sigilla all small, indistinct, oval, marginal.

Legs. Long curled hairs on leg IV. Basifemoral thorn setae absent.

TABLE 3. — Leg measurements of *Encycyrtia berlandi*, holotype ♀

	I	II	III	IV	Palp
Femur	2.58	2.42	2.17	3.25	2.08
Patella	2.00	1.92	1.50	1.92	1.42
Tibia	1.83	1.58	1.17	2.50	1.25
Metatarsus	1.33	1.25	1.58	3.00	—
Tarsus	0.91	0.92	1.08	1.25	1.17
Total	8.65	8.09	7.50	11.92	5.92

Scopula. Metatarsi and tarsi : I, II, both thin, entire; thinner, mixed with few scattered setae, and not quite full length on metatarsi. Metatarsi III, two very thin clumps in distal half (prolateral) to third (retrolateral); IV, similar but in distal fifth. Tarsus : III, thin, divided by setal band 4-6 wide; IV, setal band 6-8 wide. Basifemoral thorn setae absent but prolateral spines on patellae III conical. Claws. Two teeth on paired claws of leg I, no teeth on leg IV or palpal claw.

Spines. Leg I, fe p1, d3w, pa 0, ti 0, me 0; leg 2, fe p1, d4w, pa 0, ti 0, me 0; leg 3, fe p2, d3w, r2, pa p2, r1, v1, ti p1, r1, v5, me p3, r2, v4; leg 4, fe d3w, r1, pa r1, ti p0, r2, v3, me p2, r2, v5; palp, fe p1 d3w, pa 0, ti p1, v5. Preening combs : 1 each of 3 on retroventrally on III, IV.

Trichobothria in two rows, each of 9 for 2/3 on tibiae; about 15 in curved row on metatarsi; about 16 filiform on tarsi.

Spermathecae two, each a raised mound with short, slender sinuous lateral lobe with spherical apex.

Spinnerets. PMS 0.37 long, 0.13 wide, 0.08 apart, about 0.43 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.58, 0.13, 0.06, 0.77, respectively.

**Etymology** : the specific epithet is a patronym in honour of M. Lucien BERLAND for his contributions to the knowledge of the spider fauna of New Caledonia.

**Distribution and habitat** : *Encycyrtia berlandi* is known only from the type locality, Col des Roussettes, in an area of rainforest with rocks about 0.3 m in diameter across the floor.

**Material examined** : only the type.

*Encyocrypta cagou* n. sp.  
(figs 1 & 25-31; table 4)

**Type material** : holotype ♀ : Rivière Bleue, near Kaori Géant, 120 m, 25.v.1984 (G. MONTETH & D. COOK), QM s 7130; one ♀ : paralectotype of *E. meleagris*.

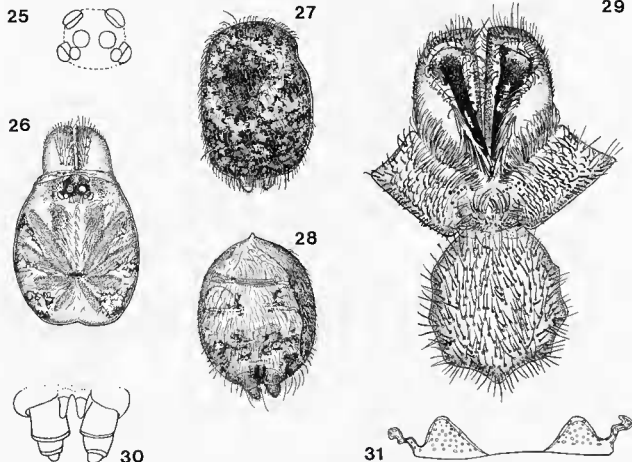
**Diagnosis** : differs from *E. meleagris* by the legs having distinct darker annulations and in having fewer maxillary cuspules; also the abdomen is almost all white ventrally.

**Females**. Maxillae with less than 13 cuspules on average of both. Paired claws of leg IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula in distal fifth of metatarsi IV; distal half of metatarsi III. Abdomen

dorsally white with brown mottling. Legs with distinct darker annulations. Spermathecae very similar to *E. meleagris*, two trianguloid mounds with slender lateral lobes ectally. ♂ unknown.

**Description** : holotype ♀. Carapace 4.92 long, 4.00 wide. Abdomen 5.00 long, 3.58 wide. Total length, 12. Colour in alcohol. Carapace orange brown, upper caput, margins between striae brown, reticulated brown markings on interstitial ridges; chelicerae red brown, legs yellow brown with brown annulations on distal femora and patellae, proximal and distal tibiae and midmetatarsi. Abdomen dorsally predominantly white with brown medial and lateral mottling, ventrally pallid with paired brown markings beside posterior booklung covers, sub-centrally and in front of and beside spinnerets.

Carapace. Light covering of long fine grey



FIGS 25-31. *Encyocrypta cagou* n. sp., holotype ♀. 25 : eye group, dorsal view; 26 : carapace and chelicerae, dorsal view; 27 : abdomen, dorsal view (27), ventral view (28); 29 : sternum, maxillae, labium, and chelicerae, ventral view; 30 : spinnerets, ventral view; 31 : spermathecae, ventral view.

hairs on caput, in lines on interstitial ridges, and on posterior corners of carapace; 2-4 long black bristles beside posterior striae; about 9 antero-medial bristles starting deep in fovea; 3 long and several short between PME and AME. Fovea short straight.

Eyes. Tubercle distinct but low mound. Group is 0.38 of head-width. Back row straight. Eye group front width, back width, length, 56 : 68 : 49. MOQ front width, back width, length, 37 : 45 : 52. AME : ALE : PME : PLE, 14 : 20 : 10 : 16. AME-AME, 0.6, AME-ALE, 0.9, ALE-ALE, 1.4, PME-PLE, 0.1, PME-PME, 1.9, ALE-PLE, 1.4.

Chelicerae. Stout, rounded; with sparse covering of long and short erect black bristles prodorsally; longer finer bristles laterally. Rastellum of 7 short thick, curved bristles on inner corners. Furrow promargin with 8 closely spaced large teeth, basomesally with 4 small teeth. Labium 0.92 wide, 0.46 long. Labiosternal suture is two sigilla medially joined. Maxillae 1.42 long in front, 2.08 long behind, 0.96 wide; with about 10-11 cuspules along inner edge. Heel produced; anterior lobe, short, just distinct. Sternum 2.71 long, 2.29 wide. Sigilla all small, oval, marginal.

Legs. Glabrous strips overhanging by short black bristles. Scopula. Metatarsi and tarsi : I, II, full, entire. Metatarsi III, in distal half, thin, divided by setae; IV, thinner, in distal fifth, scattered. Tarsi : III, full, divided by narrow band (2-3 wide) of setae; IV, very thin, setal band about 5-7 but less than scopula. Basifemoral thorn setae absent. Claws. Two teeth on paired claws of legs I, IV, no teeth on palpal claw.

TABLE 4. — Leg measurements of *Encyrcrypta cagou*, holotype ♀

	I	II	III	IV	Palp
Femur	3.50	2.75	2.67	3.75	2.58
Patella	2.25	2.00	1.67	2.08	1.67
Tibia	2.17	1.92	1.50	2.83	1.42
Metatarsus	1.83	1.67	1.75	3.00	—
Tarsus	1.00	1.08	0.92	1.33	1.67
Total	10.75	9.42	8.51	12.99	7.34

Spines. Legs I, fe p1, d8w, pa 0, ti 0, me v1; leg 2, fe p1, d4w, pa 0, ti pl, v0, me v1; leg 3, fe p2, d1, r1, pa p2, ti p2, r1, v5, me p4, r2, v3; leg 4, fe d3w, r1w, pa r1, ti r3, v6, me p3, r3, v4; palp, fe p1 d4, pa 0, ti p1 v6. Preening combs : one weak of 2 setae on metatarsus IV, right side.

Trichobothria in two rows, each of 7 for two-thirds length of tibiae; about 8 in diagonal row on metatarsi; 4 clavate and 11 filiform on tarsi.

Spermathecae very similar to *E. meleagris*, two trianguloid mounds with slender lateral lobes ectally.

Spinnerets. PMS 0.46 long, 0.13 wide, 0.13 apart, about 0.26 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.54, 0.40, 0.18, 1.12, respectively.

**Etymology** : the specific epithet is taken from the endemic Cagou, symbolic bird of New Caledonia.

**Distribution and habitat** : known only from rainforest at Rivière Bleue where it was taken on or near trees.

**Material examined** : only the types.

*Encyrcrypta colemani* n. sp.

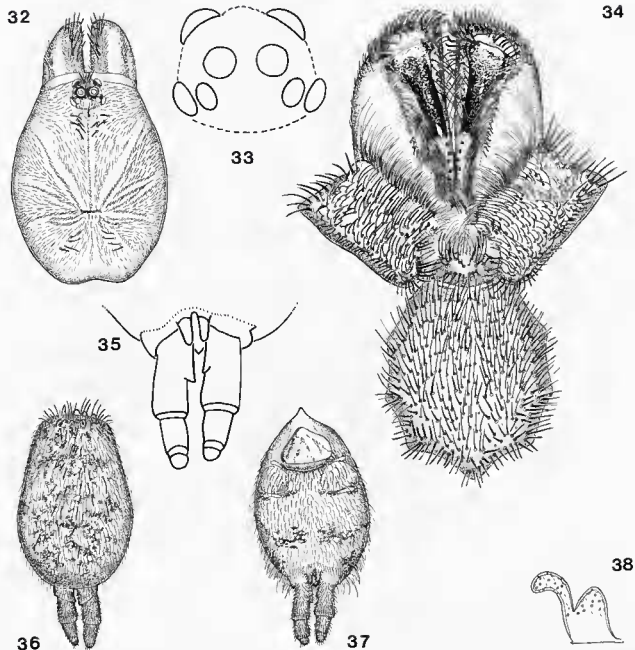
(figs 1 & 32-38; table 5)

**Type material** : holotype ♀, Mts Koghis, 1000 ft, in leaf litter, 8.v.1971 (P. H. COLEMAN), AMS KS 4749.

**Diagnosis** : maxillae with less than 13 cuspules on average of both. Females. Spermathecae two, each a raised mound with small recurved lateral lobe. Paired claws of leg IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula in distal fifth of metatarsi IV; distal half of metatarsi III. Abdomen dorsally with large white spots forming fishbone pattern. Legs without annulations. ♂ unknown.

**Description** : holotype ♀. Carapace 6.32 long, 5.19 wide. Abdomen 5.54 long, 3.77 wide. Total length, 16. Colour in alcohol. Carapace and legs yellow brown, chelicerae orange brown. Abdomen dorsally light brown (probably slightly faded) with five large white paired areas; ventrally pallid with brown area beside posterior booklungs centrally and in front of spinnerets.

Carapace. Bristles : with uniform covering of fine brown hairs and line of few short low brown bristles on posterior side of striae; posterior striae with 5-7 erect brown bristles; margin with fine brown bristles and hairs; 10 thick and



FIGS 32-38. - *Encyrcrypta colemani* n. sp., holotype ♀. 32: carapace and chelicerae, dorsal view; 33: eye group, dorsal view; 34: sternum, maxillae, labium, and chelicerae, ventral view; 35: spinnerets, ventral view; 36, 37: abdomen, dorsal view (36), ventral view (37); 38: spermathecae, ventral view.

several finer brown bristles anteromedially and band of short bristles laterally, about 7 thick and several finer bristles between PME; 7 thick and some smaller bristles between ALE; anterior striae glabrous distinct, others narrow indistinct. Fovea straight.

Eyes. Tubercle distinct. Group is 0.35 of head-width. Back row recurved. Eye group front width, back width, length, 58 : 68 : 50. MOQ front width, back width, length, 37 : 50 : 28. AME : ALE : PME : PLE, 13 : 21 : 11 : 16. AME-AME, 0.8, AME-ALE, 1.2, ALE-ALE, 1.6, PME-PLA, 0.2, PME-PME, 2.2, ALE-PLA, 1.7.

Chelicerae. Narrow; prodorsally with band of long erect brown bristles and numerous shorter, laterally a glabrous band bounded by generally setose lateral face. Rastellum a very slight mound with numerous long curved bristles. Furrow promargin with 1 small and 11 large to medium sized teeth, basomesally with 5 small teeth and several granules.

Labium 0.99 wide, 0.50 long. Labiosternal suture a narrow shallow groove of separate sigilla. Maxillae 1.78 long in front, 2.49 long behind, 1.21 wide; with about 8-9 cuspules along inner edge. Heel distinctly produced; anterior lobe short, just distinct. Sternum 3.27 long, 2.63 wide. Sigilla all small, subcircular, marginal.

TABLE 5. — Leg measurements of *Encyocrypta colemani*, holotype ♀

	I	II	III	IV	Palp
Femur	4.55	4.19	3.06	5.19	3.34
Patella	3.06	2.70	1.92	2.49	1.99
Tibia	2.84	2.42	2.13	3.34	1.85
Metatarsus	2.63	2.34	2.49	4.19	—
Tarsus	1.42	1.35	1.35	1.63	1.99
Total	14.50	13.00	10.95	16.84	9.17

Legs. With light covering of bristles and brown hairs. Scopula. Metatarsi : I, II, full, dense, entire; III, distal half, thin, divided by bristles into two narrow triangles; IV, similar but in distal one fifth. Tarsi : I, II, full, dense, entire save for very subtle line of setae beginning distally extending to half the length; III, similar to II, but setal band 2-5 wide, widest distally; IV, thin, setal band 6-10 wide. Basifemoral thorn setae absent. Claws. 2-3 teeth on both of paired claws of legs III, IV; no teeth on palpal claw.

Spines. Leg 1, fe p1, d4w, pa 0, ti v3, me v1; leg 2, fe p1, d3w, pa 0, ti p2, v2, me v1; leg 3, fe p3, d2w, r3, pa p2, ti p2, r2, v7, me p3, r2, v7; leg 4, fe d3w, r1, pa 0, ti p0, r3, v7, me p2, r2, v11; palp, fe p1, d3w, pa p0, ti p2, v8. Preening combs : 1 each of 3 on retroventral metatarsi III, IV.

Trichobothria in two rows, each of 10 for full length of tibia; about 16 in curved row on metatarsi; 3 clavate and about 20 filiform on tarsi.

Spermathecae two, each a raised mound with small recurved lateral lobe.

Spinnerets. PMS 0.50 long, 0.21 wide, 0.14 apart, about 0.34 of basal PLS in diameter, PLS length of basal, middle, apical, and total articles 1.35, 0.53, 0.57, 2.45, respectively.

**Distribution and habitat :** *Encyocrypta colemani* is known only from the type locality, Mts Koghish, at an altitude of about 300 m.

**Material examined :** only the type.

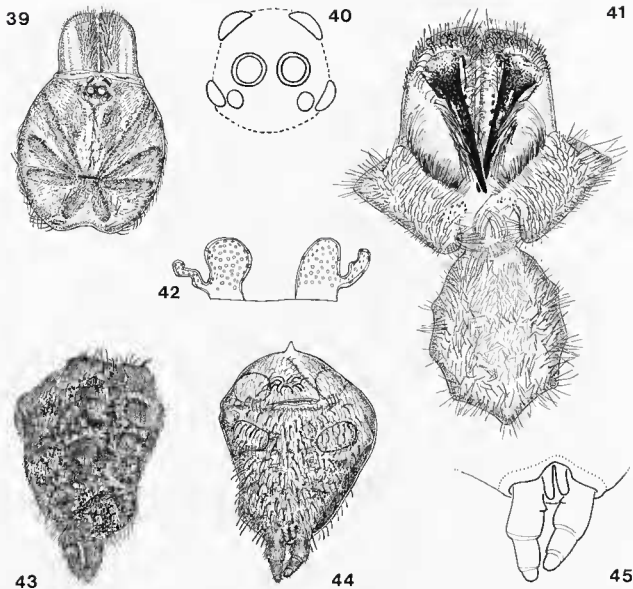
#### *Encyocrypta decooki* n. sp.

(figs 1 & 39-45; table 6)

**Type material :** holotype ♀ : Rivière des Pirogues (headwaters), altitude 350-400 m, 22.v. 1984 (G. MONTETH & D. COOK), QM s 4137.

**Diagnosis :** females. Large spiders, total length about 26 mm. Maxillae with less than 13 cuspules on average of both. Paired claws of leg IV with teeth. Basifemoral thorn setae present on prolateral basal femora I, II, and retrobasal IV. Preening combs present. Scopula on distal sixth of metatarsi IV; distal third of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs without distinct darker annulations. Spermathecae two, cactus-like, each a large inner lobe with smaller bent lateral lobe. ♂ unknown.

**Description :** holotype ♀. Carapace 10.76 long, 9.90 wide. Abdomen 13.20 long, 8.16 wide. Total length, 27. Colour in alcohol. Carapace orange brown with dark brown lateral margins, caput and interstitial ridges light brown with darker lines defining all pairs especially anterior, and also along anteromedial bristle line brown, cheli-



FIGS 39-45. *Encyrcrypta decaoki* n. sp., holotype ♀. 39: carapace and chelicerae, dorsal view; 40: eye group, dorsal view; 41: sternum, maxillae, labium, and chelicerae, ventral view; 42: spermathecae, ventral view; 43, 44: abdomen, dorsal view (43), ventral view (44); 45: spinnerets, ventral view

cerae red brown, legs dark orange brown. Abdomen (ruptured laterally) dorsally brown with small irregularly placed white mottling; ventrally light brown with poorly defined darker areas.

Carapace. Fine black hairs in narrow bands reticulating across interstitial ridges, fine black bristles thinly spread on lateral caput and interstitial ridges; bristles longer, thicker on lateral margins and flanking posterior striae (6-10); no

thick paired foveal bristles but anteromedial line begins deep in fovea with one long curved bristle with 6 thick and several finer anteriorly; fine hairs, 4 thick and numerous finer bristles between PME, 8 thick and several finer between ALE, hirsute cuticular shelf evident below carapace above coxae IV. Fovea broad, straight. Striae distinct.

Eyes. Tubercle distinct. Group is 0.33 of head-

width. Back row procurved. Eye group front width, back width, length, 76 : 99 : 76. MOQ front width, back width, length, 54 : 67 : 41. AME : ALE : PME : PLE, 19 : 30 : 14 : 24. AME-AME, 0.8, AME-ALE, 1.3, ALE-ALE, 1.3, PME-PLE, 0.1, PME-PME, 2.1, ALE-PLE, 1.9.

**Chelicerae.** Broad, stout, rounded; with broad band of few long black and numerous short bristles and some hairs prodorsally; no glabrous band, lateral band of short bristles and hair. Rastellum a low mound on inner corners with numerous short stiff curved black spine-like bristles. Furrow promargin with 7 very large and 5 smaller teeth, hasomesally with 10 small teeth in slightly irregular line and about 10 granules basally.

**Labium** 2.21 wide, 0.92 long. Labiosternal suture not groove but two mounded sigilla joined medially. Maxillae 2.92 long in front, 4.00 long behind, 1.83 wide; with about 8-10 thick cusps along inner edge. Heel slightly produced; anterior lobe, distinct, defining groove extends for about 0.80 of width. Sternum 5.75 long, 4.58 wide. Sigilla all small, oval, marginal.

TABLE 6. — Leg measurements of *Encyoerypta decocki*, holotype ♀

	I	II	III	IV	Palp
Femur	6.98	6.35	5.87	8.41	5.33
Patella	4.76	4.44	3.65	4.44	4.56
Tibia	4.92	4.29	3.65	6.03	3.50
Metatarsus	3.97	3.97	4.29	7.14	
Tarsus	2.38	2.22	2.06	2.69	3.67
Total	23.01	21.27	19.52	28.71	17.06

**Legs.** All covered uniformly with fine black hairs, most distinct on femora with striking longitudinal glabrous bands; 30-40 small thorn setae on prolaterobasal face of femora I, II, and fewer on retrolaterobasal face of femora IV. Scopula. Metatarsi, tarsi, I, II, full, dense, entire. Metatarsi : III, lighter, in distal third, mixed with scattered setae; IV, thin, in two small triangles in distal one-sixth. Tarsi : III, dense, mixed with about 20 setae but not in dividing band; IV, full, dense, divided by narrow setal band 4-6 wide. Basifemoral thorn setae absent but thick bristles present on distal and ventral femora III, IV. Claws. One long and one short tooth on paired claws of legs I, IV, no teeth on palpal claw.

**Spines.** Leg I, fe p1, pa 0, ti v1, me v1; leg 2, fe p1, pa 0, ti p2, v1, me v1; leg 3, fe p3, d1, r4, pa p2, r1, ti p2, r2, v9, me p4, r3, v5; leg 4, fe pl, d3, r1, pa r1, ti pl, r5, v9, me p3, r3, v11; palp, fe p1, pa 0, ti p4, v7. Preening combs : 1 each of 2-3 setae retroventrally on III, IV.

**Trichobothria** in two rows, each of about 11 for about 0.6 of tibiae; about 13 in curving row mixed with short, prostrate grey hairs on metatarsi; no clavate and 10-15 filiform on tarsi.

**Spermathecae** two, cactoid, each a large inner lobe with smaller bent lateral lobe.

**Spinnerets.** PMS 1.08 long, 0.33 wide, 0.17 apart, about 0.30 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 1.96, 0.96, 0.46, 3.38, respectively.

**Etymology:** the specific epithet is a patronym in honour of fine collector, Mr Doug Cook.

**Distribution and habitat:** *Encyoerypta decocki* is known only from rainforest at the type locality, in the headwaters of the Rivière de Pirogues.

**Material examined:** only the holotype.

*Encyoerypta djiaouma* n. sp.

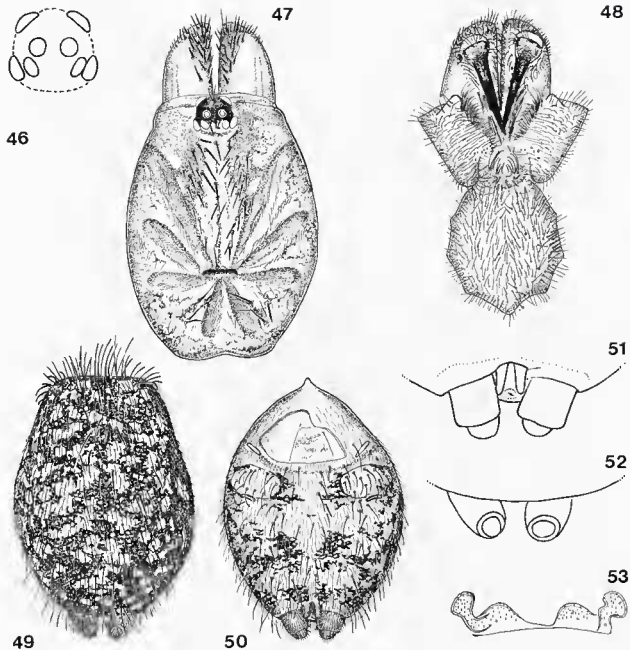
(figs 1 & 46-53; table 7)

**Type material:** holotype ♀ : Mt Djiaouma, st 103b, forêt humide *Araucaria*, 1020 m, 165° 21'35" E, 21°26'41" S, 18.x.1988 (A. & S. TILLIER, J. CHAZEAU), MNHN.

**Diagnosis:** maxillae with less than 13 cusplets on average of both. Females. Paired claws of leg IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula absent on metatarsi IV; almost absent on metatarsi III. Abdomen dorsally with fine white spots forming irregular herring-bone effect posteriorly. Legs without annulations. Spermathecae two, each a low domed mound with short, broad (outer) lateral lobe with distinct apical enlargement. ♂ unknown.

**Description:** holotype ♀. Carapace 3.97 long, 3.20 wide. Abdomen 3.77 long, 2.77 wide. Total length, 9. Colour in alcohol. Carapace light green brown with brown caput, brown lines on





FIGS 46-53. — *Encycrypta djiaouana* n. sp., holotype ♀. 46: eye group, dorsal view; 47: carapace and chelicerae, dorsal view; 48: sternum, maxillae, labium, and chelicerae, ventral view; 49, 50: abdomen, dorsal view (49), ventral view (50); 51: spinnerets, ventral view; 52: plus, dorsal view; 53: spermathecae, ventral view.

interstitial ridges and brown margins, chelicerae green brown, and legs yellow brown. Abdomen dorsally brown with large white spots forming irregular herring-bone effect posteriorly; ventrally pallid with brown areas beside post book-lungs, centrally, and near spinnerets.

Carapace. Numerous fine black hairs sparse on caput and following brown lines on interstitial ridges, and on posterior lateral margins; 6-7 erect long black bristles beside posterior striae; 9 long thick anteromedial bristles; band of low short black bristles lateral of those; 2 pairs of fine foveal bristles; 3 thick between PME and 4 thick and several finer between ALE; striae indistinct, narrow, save for wide glabrous anterior pair. Fovea straight.

Eyes. Tubercle low, indistinct. Group is 0.36 of head-width. Back row straight. Eye group front width, back width, length, 35 : 40 : 31. MOQ front width, hack width, length, 21 : 24 : 16. AME : ALE : PME : PLE : 6 : 13 : 7 : 10. AME-AME, 1.5, AME-ALE, 1.3, ALE-ALE, 2.3, PME-PLE, 0.3, PME-PME, 2.0, ALE-PLE, 1.8.

Chelicerae. Short, rounded with sparsely setose prodorsal band of long and short black bristles; laterally glabrous, save for single line of setae. Rastellum a group of long curved setae, not on any mound. Furrow promargin with 5 large mixed with 5 smaller separated teeth, basomesally with 3 small teeth and several granules.

Labium 0.71 wide, 0.36 long. Labiosternal suture a narrow groove of two separated sigilla. Maxillae 1.10 long in front, 1.56 long behind, 0.75 wide; with about 10-12 cuspules in inner angle. Heel broad, rounded; anterior lobe, indistinct. Sternum 2.13 long, 1.92 wide. Sigilla all small, oval, indistinct, marginal.

TABLE 7. — Leg measurements of *Encyocrypta djiaouma*, holotype ♀

	I	II	III	IV	Palp
Femur	2.56	2.34	2.20	3.20	2.06
Patella	1.56	1.63	1.35	1.21	1.28
Tibia	1.78	1.56	1.28	2.20	1.14
Metatarsus	1.07	1.28	1.63	2.63	—
Tarsus	0.85	0.78	1.28	1.28	1.07
Total	7.82	7.59	7.74	10.52	5.55

Legs. Setation light; basifemoral thorn setae absent. Scopula. Metatarsi : I, II, thin, full, divided by two lines of setae; III, few scattered hairs proventrally, fewer retroventrally; IV,

absent. Tarsi : I, II, thin, full, divided by setal band 2-3 wide; III, very thin, setal band 6-8 wide; IV, reduced to 2-3 lines of hair on each side, entire ventral surface setose. Basifemoral thorn setae absent. Claws. 2-3 teeth on paired claws of legs I, IV; no teeth on palpal claw.

Spines. No true spines on legs I, II, or femora, only slightly thicker bristles dorsally and prolaterally. Leg 1, 0; leg 2, 0; leg 3, fe 0, pa p2, ti p2, v8 (6w), me p2, r2, v5; leg 4, fe 0, pa 0, ti r2, v10w, me p2, r2, v7; palp, fe 0, pa 0, ti v4. Preening combs : 1 each of two long setae on III, IV.

Trichobothria in two rows, each of about 8 for full on tibiae; about 13 in curved row on metatarsi; 3 distinct clavate and about 10 filiform on tarsi.

Spermathecae two, each a low domed mound with short, broad (outer) lateral lobe with distinct apical enlargement.

Spinnerets. PMS 0.28 long, 0.12 wide, 0.04 apart, about 0.35 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.46, 0.25, 0.07, 0.78, respectively.

**Distribution and habitat :** *Encyocrypta djiaouma* is known only from rainforest at the type locality, Mt Djiaouma.

**Material examined :** only the type.

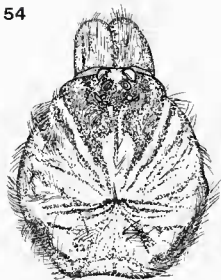
*Encyocrypta eneseff* n. sp.

(figs 1 & 54-60; table 8)

**Type material :** holotype ♂ : Mt Do, leaf litter, rainforest, at about 900 m altitude, 20.V.1987 (N. I. PLATNICK), QM s 7124.

**Diagnosis :** maxillae with less than 13 cuspules on average of both. Males. Paired claws of leg IV with one row of teeth. Basifemoral thorn setae and preening combs absent. Scopula in distal fifth of metatarsi IV; distal half of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs with darker annulations. Male : tibia I with distal spur bearing megaspine distal of which is pallid cuticle, upper megaspine short, thorn-like with erect conical process; palpal bulb long, pyriform, with one long and one short twisted keel on embolus for distal fifth of bulb; cymbium dimorphic. ♀ unknown.

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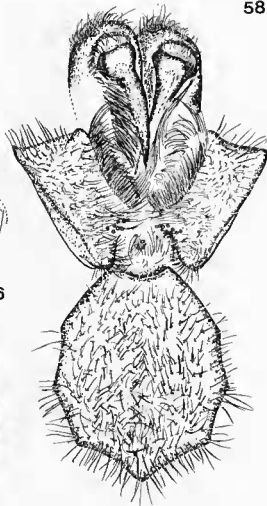


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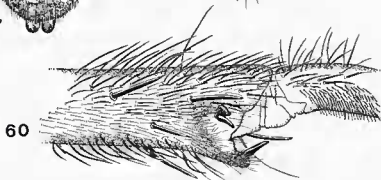
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FIGS 54-60. *Encyocrypta enesoff* n. sp., holotype ♂. 54 : carapace and chelicerae, dorsal view ; 55 : eye group, dorsal view ; 56 : spinnerets, ventral view ; 57 : abdomen, dorsal view ; 58 : sternum, maxillae, labium, and chelicerae, ventral view ; 59 : palpal tibia, cymbium, and bulb, prolateral view ; 60 : tibia and metatarsus I, prolateral vs w.

**Description** : holotype ♂. Carapace 6.84 long, 6.17 wide. Abdomen 5.92 long, 3.83 wide. Total 16. Colour in alcohol. Carapace orange brown with brown margins, caput and interstitial ridges, chelicerae red brown, and legs orange brown save for brown annulation on femora, distal patellae and tibiae, and proximal metatarsi. Abdomen dorsally brown with irregular white areas laterally; pattern indistinct; covered with light pile of long brown hairs; ventrally brown with pallid longitudinal medial and transverse bands.

Carapace. Light covering of brown hairs and short black bristles on posterior interstitial ridges. Fovea short, straight with recurved ends. Five long and 3-4 short bristles anteromedially; 6-8 short fine bristles between PME, 6 long and several short between ALE. Striae shallow narrow, distinct.

Eyes. Group is 0.35 of head-width. Back row straight. Eye group front width, back width, length, 62 : 75 : 55. MOQ front width, back width, length, 49 : 50 : 33. AME : ALE : PME : PLE, 22 : 22 : 12 : 19. AME-AME, 0.4, AME-ALE, 0.5, ALE-ALE, 1.0, PME-PLA, 0.1, PME-PME, 1.4, ALE-PLA, 1.2.

Chelicerae. Short, narrow, rounded; prodorsally with numerous long curved black setae mixed with numerous fine brown hairs. Rastellum absent. Furrow promargin with small and 9 large teeth, basomesally with 1 small tooth. Pallid in intercheliceral area.

Labium 1.00 wide, 0.42 long. Labiosternal suture a wide shallow groove of two sigilla. Maxillae 1.92 long in front, 2.46 long behind, 1.04 wide; with about 10-13 cuspules in inner angle. Heel slightly produced; anterior lobe, just distinct. Sternum 3.88 long, 3.00 wide. Sigilla small, shallow, marginal.

Legs. Tibia I with distal spur bearing megaspine distal of which is pallid cuticle, upper megaspine short, thorn-like with erect conical

process. Scopula, Metatarsus : I, II, light, full, entire; III, thin, in distal half, divided by scattered setae; IV, a sparse clump in distal 1/5. Tarsus : I, II, light, full, entire; IV, full, divided by band of 2-3 setae wide. Preening combs absent. Claws, 4 teeth in each of two rows on paired claws of I; one minute and 3 small teeth in one row on IV.

Spines. Leg 1, fe p2, d4, r2, pa 0, ti p2, v6 + 2 megaspines, me v1; leg 2, fe p4, d5, r4, pa p1, ti v9, me 0; leg 3, fe p4, d5, r3, pa p2, r1, ti p3, r2, v8, me p3, r2, v6; leg 4, fe p3, d4, r2, pa r1, ti p3, r3, v8, me p3, r4, v7; palp, fe p2, d4, r1, pa 0, ti pl, v4.

Trichobothria in two rows, each of about 10 on tibiae for full length; about 12 on metatarsi; 2 small clavate and 15-20 filiform on tarsi.

Palp. Bulb long, pyriform, with one long and one short twisted keel on embolus for distal fifth of bulb; cymbium dimorphic.

Spinnerets. PMS 0.96 long, 0.50 wide, 0.21 apart, about 0.41 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 1.88, 0.67, 0.29, 2.79, respectively.

**Etymology** : the specific epithet is a phonetic spelling of the U.S. granting body, National Science Foundation, that provided funding for Dr Platnick to collect this material.

**Distribution and habitat** : known only from rainforest at Mt Do, at an altitude of about 900 m.

**Material examined** : only the type.

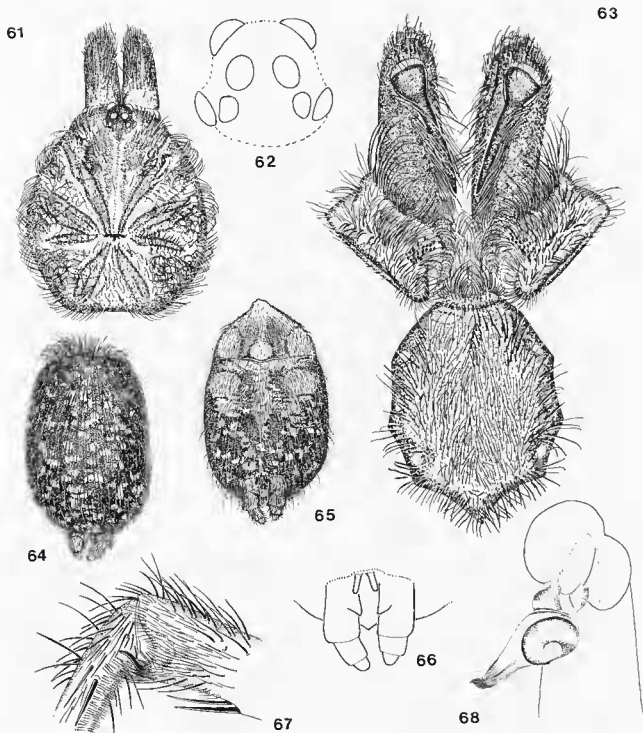
*Encyocrypta koghi* n. sp.  
(figs 1 & 61-68; table 9)

**Type material** : holotype ♂ : Mts Koghis, pit-fall traps, 500 m, 23-30.v.1987 (R. J. RAVEN & N. I. PLATNICK), QM s 4133.

**Diagnosis** : ♂. Tibia I with short spur and long megaspine, no opposing prolateral process; bulb pyriform with gradual embolic origin; embolus broad, distal one-sixth twisted quickly in short keeled spiral forming point. Maxillae with more than 13 cuspules on average of both. Paired claws of leg IV with one row of teeth. Basifemoral thorn setae absent. Preening combs present. Scopula only small in proventral metatarsi IV;

TABLE 8. - Leg measurements of *Encyocrypta enesoffi*, holotype ♂

	I	II	III	IV	Palp
Femur	5.59	5.00	4.75	6.42	3.00
Patella	3.00	2.83	2.33	2.83	1.92
Tibia	3.83	3.75	3.50	5.08	2.08
Metatarsus	3.42	3.25	3.92	5.67	—
Tarsus	1.92	1.92	1.67	2.08	1.46
Total	17.76	16.75	16.17	22.08	8.46



FIGS 61-68. *Encyocrypta koghi* n. sp., holotype ♂. 61 : carapace and chelicerae, dorsal view ; 62 : eye group, dorsal view ; 63 : sternum, maxillae, labium, and chelicerae, ventral view ; 64, 65 : abdomen, dorsal view (64), ventral view (65) ; 66 : spinnerets, ventral view ; 67 : tibia and metatarsus I, profateral view ; 68 : palpal tibia, cymbium, and bulb, ventral view.

distal third of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs without annulations. ♀ unknown.

**Description** : holotype ♂. Carapace 7.84 long, 6.42 wide. Abdomen 7.25 long, 4.58 wide. Total length, 17. Colour in alcohol. Carapace orange brown with fine brown mottling on caput and interstitial margins, legs orange brown, sternum orange brown. Abdomen dorsally brown with numerous irregularly distributed small white markings; ventrally brown with pallid region medially and transversely behind posterior hook-lungs.

Carapace. Margin with wide band of bushy grey hair, centrally glabrous. Bristles numbers and positions : generally long strong, numerous and black on margins, short and uniformly spread elsewhere but absent in striae; line of short strong on anterior cephalic margin; group of 6 long recurved between ALE, and bases of 5 thick between PME; line of about 8 thick anteromedial bristles (bases only). Striae pallid, glabrous, distinct. Fovea short, straight. Clypeus absent.

Eyes. PME and PLE contiguous. Group is 0.39 of head-width. Three rows; back row recurved. Eye group front width, back width, length, 50 : 64 : 49. MOQ front width, back width, length, 37 : 43 : 30. AME : ALE : PME : PLE, 18 : 18 : 12 : 7. AME-AME, 0.2, AME-ALE, 0.6, ALE-ALE, 1.0, PME-PLE, 0, PME-PME, 1.3, ALE-PLE, 1.2.

Chelicerae. Slender, slightly elongated. Dorsal surface entirely setose, no intervening glabrous band. Bristles : prodorsally, a band of numerous long blank, more laterally few short black followed by distinct band of numerous short black and fine more laterally. Rastellum is several long curved bristles. Fangs long, slender. Widely spaced line of 9 large and 2 smaller teeth on promargin, basomesally bare; furrow narrow.

Labium 0.92 wide, 0.46 long. Anterior edge with numerous long, thick, incurved bristles. Labiosternal suture a broad groove. Maxillae 2.04 long in front, 2.58 long behind, 0.96 wide; with 22-23 cusplae along inner edge but not onto heel. Heel angular; anterior lobe short, distinct. Sternum 4.04 long, 3.21 wide. Bristles long, thick, erect, black on margins, thin and shorter centrally intermixed with fine grey hairs. 6 sigilla, all marginal.

Legs I and IV similar thickness. Basifemoral

thorn setae absent. Silver bush of hair on coxae and trochantera, yellow brown hush on femora, in parts obscuring cuticle, light hairs covering dorsal tibiae, denser ventrally. Coxae with light covering of adpressed fine grey hairs. Tibia I with short spur and long megaspine, no opposing prolateral process. Scopula. Dense, bases not discernible but not obscuring cuticle. Scopulate area pallid. Metatarsus : I asymmetrical, entire, in distal half; II, entire, extends for three-quarters on prolateral surface and half of ventral and retrolateral surface; III, scattered in distal one-third prolaterally, thin for distal one-sixth retrolaterally and ventrally; IV, one small area on prolateral surface distally. Tarsi : I, II, full, entire; III, thin, full length, parted by band 2-3 setal rows wide; IV, thinner than III, setal band 5-6 rows wide. Metatarsal preening combs, all retrolateral; two setae on III; 3 grouped setae on IV. Claws. 6 teeth in each of two juxtaposed, parallel-sided (not scooped) rows on paired claws of leg I, leg IV only with 2 teeth on outer faces of claws.

TABLE 9. Leg measurements of *Encyocrypta knighti*, holotype ♂

	I	II	III	IV	Palp
Femur	5.92	4.75	4.58	6.75	3.50
Pateilla	3.92	3.33	2.83	3.25	2.17
Tibia	4.25	4.08	3.25	5.42	2.42
Metatarsus	3.67	3.75	4.75	7.34	
Tarsus	1.75	1.75	2.08	2.58	1.33
Total	19.51	17.66	17.49	25.34	9.42

Spines. All strong. Leg I, fe pl, d4, pa 0, ti p1, v5 + megaspine, me pl, v1 proximal; leg 2, fe p2, d4, pa 0, ti p3, v4, me p2, v1 proximal; leg 3, fe p3, d4, r3, pa p3, r1, ti p2, d1, r2, v8, me p5, r5, v8; leg 4, fe pl, d4, r4, pa r1, ti p2, d1, r3, v8, me p6, r5, v11; palp, fe p1, d2, pa 0, ti p2.

Trichobothria in two rows, each of about 10 for proximal three-quarters of tibiae; about 22 in curving row on metatarsi; about 3 clavate and 14 filiform in two rows divided by setae on tarsi.

Palp. Bulb pyriform with gradual embolic origin; embolus broad, distal one-sixth twisted quickly in short keeled spiral forming point.

Spinnerets. PMS 0.38 long, 0.15 wide, 0.08 apart, about 0.28 of basal PLS in diameter, PLS length of basal, middle, apical, and total articles 1.13, 0.39, 0.31, 1.83, respectively.

**Distribution and habitat** : known only from rainforest at Mts Koghiis, at an altitude of 500 m.

**Material examined** : only the type.

*Encyocrypta kone* n. sp.

(figs 1 & 69-76; table 10)

**Type material** : holotype ♂ : (paralectotype of *Barychelus badius*), « Coné » [= ?Koné], MNHN 5.173.

**Diagnosis** : maxillae with more than 13 cuspules on average of both. Males. Paired claws of leg IV with two rows of teeth. Basifemoral thorn setae absent. Preening combs present. Scopula in distal quarter of metatarsi IV; distal half of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs without annulations. Tibia I of males with long distal conical spur on proventral edge bearing long straight megaspine; dorsal process and megaspine absent. Palpal bulb barrel-shaped with long tapering embolus. ♀ unknown.

**Description** : holotype ♂. Carapace 8.80 long, 7.44 wide. Abdomen 4.64 long, 4.64 wide. Total length, 19. Colour in alcohol. Carapace, chelicerae, and legs red brown. Abdomen dorsally brown with numerous white spots partially obscured by brown hairs and bristles; ventrally yellow brown patches in front of spinnerets, two long brown marks centrally, and two on inner edges of posterior booklung covers.

Carapace. Bristles : 3 thick and several fine anteromedian bristles; 2 long thick and several small between PME; 1 long thick and several finer in between anterior eye group; 2 thick and several fine between ALE; uniform covering of short black bristles; laterally, margins with pile of golden hair obscuring cuticle and 1-3 rows of long curved bristles; clypeus absent. Caput curved but low thoracic region slopes down from fovea. Striae distinct glabrous. Fovea short, shallow, slightly procurved.

Eyes. Occupy 0.22 of head-width. Tubercle distinct. Ratio of AME : ALE : PME : PLE, 22 : 19 : 14 : 22. MOQ front : back : long, 45 : 46 : 40; MOQ front width : back width : length, 45 : 46 : 40. Back row slightly procurved. Eye group front : back : long, 53 : 68 : 62. Eye interspaces (as AME

diameters) : AME-AME, 0.4, AME-ALE, 0.6, ALE-ALE, 1.0, ALE-PLE, 1.8, PME-PLE, 0.1, PME-PME, 1.6.

Chelicerae. Covered with long curved bristles mixed with golden hairs. Low mound just above fang margin has cluster of spine-like bristles but cannot be a male equivalent of huge process in females. Promargin of furrow with 5 large and 10 smaller teeth; basomesally no teeth evident. Two to three ridges on inner face of upper chelicerae.

Labium 0.80 long, 1.60 wide. Labiosternal suture is two narrow raised sigilla separated by narrow gap. Maxillae 2.24 long in front, 3.04 long behind, 1.20 wide; with 9-10 pointed cuspules on inner angle; heel slightly produced, edge concave. Sternum 4.00 long, 3.20 wide (with mid-transverse rupture). All sigilla small, oval, circular.

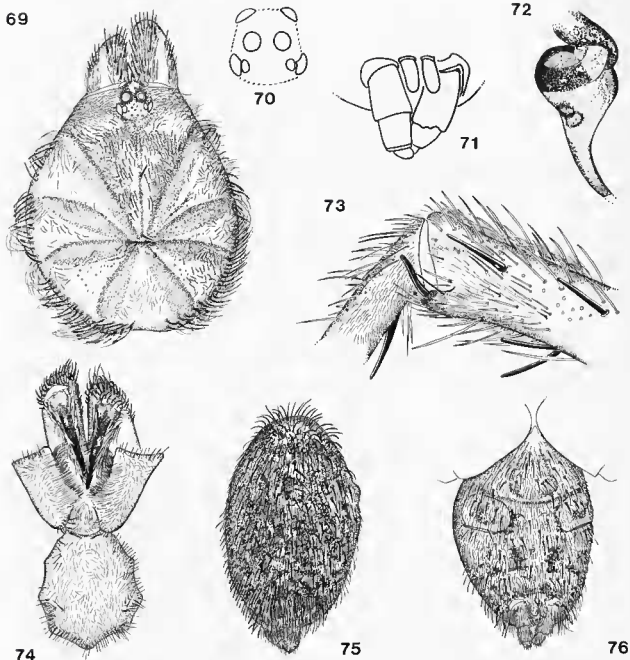
Legs. Tibia I with long distal conical spur on proventral edge and bearing long straight megaspine; dorsal process and megaspine absent. Scopula. Metatarsi : I, II, entire, in distal five-sixths; III, in distal half, thin, divided; IV, two narrow sparse bands in distal quarter. Tarsi : I, II, entire, full; III, IV, (ventral invagination is presumably preservation artefact), divided by narrow setal band. Claws. stc I and II with 2 widely scooped rows of about 8 teeth in each juxtaposed row; teeth high and distal on claws; leg IV similar but 4 proximally in outer rows, 6 distally in inner rows.

TABLE 10. Leg measurements of *Encyocrypta kone*, holotype ♂

	I	II	III	IV	Palp
Femur	7.83	7.33	6.17	7.83	4.83
Patella	4.67	4.17	3.33	3.67	3.17
Tibia	5.17	5.17	4.33	6.67	3.50
Metatarsus	6.17	6.17	6.00	8.50	—
Tarsus	2.83	2.83	3.00	3.17	1.83
Total	26.67	25.67	22.83	29.84	13.33

Spines. Leg 1, fe p3 d6, pa p2, ti p2 v5 + megaspine, me v1; leg 2, fe p4 d6, pa p2, ti p3 v6, me v1; leg 3, fe p4 d4 r4, pa p3 r2, ti p2 r3 v9, me p6 r3 v6; leg 4, fe p3 d5 r3, pa p2 r1, ti p2 r2 v11, me p4 r4 v10. Palp, fe p1 d3, pa 0, ti p1. No short thorn like spines evident, but basal femora with moderately long strong setae. Preening combs : III, 1 of 2 setae; IV, 1 of 3 setae.

Trichobothria. Tibia with ca. 15 for 0.75 its



FIGS 69-76. - *Encyocrypta kone* n. sp., holotype ♂. 69 : carapace and chelicerae, dorsal view; 70 : eye group, dorsal view; 71 : palpal bulb, ventral view; 72 : tibia and metatarsus I, prolateral view; 73 : sternum, maxillae, labium, and chelicerae, ventral view; 74 : spinnerets, ventral view; 75, 76 : abdomen, dorsal view (75), ventral view (76).



length; metatarsi with one curving row of ca. 15; two irregular bands each of ca. 15 on tarsi.

Spinnerets. PMS 0.64 long, 0.20 wide, 0.16 apart, and 0.24 of width of basal PLS. Basal, middle, apical, and total articles of PLS 0.84, 0.60, 0.36, 1.80 long, respectively.

Palp. Bulb barrel-shaped with long tapering embolus; cymbium divided into 2 similar lobes.

**Notes on type** : the holotype is the male paralectotype of *Barychelus badius* which will be treated separately. The specimen label says « Coné » which probably means Koné because the locality given by SIMON (1889) is « Koué (BOUGIER) ». The lectotype female of *Barychelus badius* (here designated) has a massive rastellum, in agreement with SIMON's description (1889) and subsequent figure (SIMON, 1892). The male (paralectotype) has more cuspsules and almost no rastellum, but it does have a rastellar bump just above the fang edge.

**Distribution** : known only from the type locality, Coné, presumed to be misspelling of Koné.

**Material examined** : only the type.

*Encyocrypta kottae* n. sp.  
(figs 1 & 77-83; table 11)

**Type material** : holotype ♀ : Plage de la Roche Percée, on sandstone conglomerate banks, above high water mark and below *Pandanus* slope, 29.X.1988 (R. J. RAVEN), QM s 15469.

**Diagnosis** : maxillae with less than 13 cuspsules on average of both. Females. Paired claws of leg IV with one small tooth. Basifemoral thorn setae and preening combs absent. Scopula in distal quarter of metatarsi IV; distal half of metatarsi III. Abdomen dorsally with fine white spots forming irregular brown chevrons. Legs without annulations. Spermathecae two, each a broad mound longer than wide with slender outer lobe apically bifurcated. ♂ unknown.

**Description** : holotype ♀. Carapace 7.25 long, 6.25 wide. Abdomen 7.67 long, 5.92 wide. Total 16. Colour in alcohol. Carapace brown with darker margins and dark triangles on caput,

cheliceræ brown, legs brown without annulations. Abdomen (damaged) dorsally brown with small white spots forming two parallel bands medially and with pallid diagonal lines forming irregular chevrons; ventrally brown but for booklung covers.

Carapace. With light uniform covering of fine black hairs, and short black bristles; about 9 bristles anteromedially; several along posterior stria margins; 6 thick and several finer bristles between PME; 1 long and about 10 smaller bristles between ALE. Fovea distinct, straight. Striae shallow, glabrous distinct.

Eyes. Tubercle distinct. Group is 0.31 of head-width. Back row procurved. Eye group front width, back width, length, 53 : 66 : 52. MOQ front width, back width, length, 40 : 43 : 29. AME : ALE : PME : PLE, 18 : 17 : 11 : 19. AME-AME, 0.5, AME-ALE, 0.7, ALE-ALE, 1.4, PME-PLE, 0.1. PME-PML, 1.4. ALE-PLE, 1.3.

Cheliceræ. Short, stout; wide band of long black bristles prodorsally mixed with numerous short black bristles. Rastellum a broad low mound set with numerous long thin curved spines. Furrow promargin with 1 small and 9 thick separated teeth, basomesally with about 10-15 small teeth.

Labium 1.33 wide, 0.67 long. Labiosternal suture shallow indistinct. Maxillae 2.04 long in front, 2.71 long behind, 1.63 wide; with 6-11 cuspsules in inner angle. Heel rounded; anterior lobe, indistinct. Sternum 4.21 long, 3.13 wide. Sigilla small, distinct, subcircular, marginal.

Legs. All of similar diameter. Basifemoral thorn setae absent.

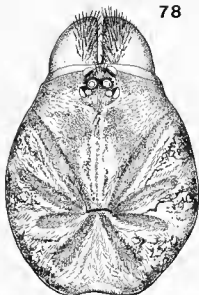
TABLE 11. — Leg measurements of *Encyocrypta kottae*, holotype ♀

	I	II	III	IV	Palp
Femur	4.33	4.00	3.58	5.34	3.08
Patella	3.08	3.08	2.33	2.75	2.33
Tibia	3.17	2.67	2.33	3.67	1.92
Metatarsus	2.25	2.25	2.42	3.83	—
Tarsus	1.42	1.17	1.17	1.58	2.00
Total	14.25	13.17	11.83	17.17	9.33

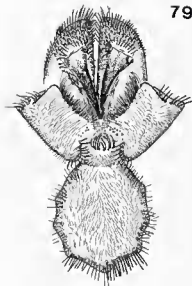
Scopula. Metatarsi and tarsi I, II, full, entire; more extensive proventrally than retroventrally on metatarsi. Metatarsi : in distal half (III) to quarter (IV), thin, divided by scattered setae. Tarsi : long, thick, divided by band of 3-4 (III) or



77



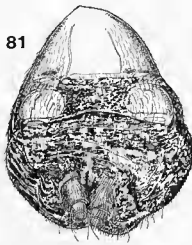
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82



83

Figs 77-83. — *Encyocrypta kotiae* n. sp., holotype ♀. 77 : eye group, dorsal view; 78 : carapace and chelicerae, dorsal view; 79 : sternum, maxillae, labium, and chelicerae, ventral view; 80, 81 : abdomen, dorsal view (80), ventral view (81); 82 : spermathecae, ventral view; 83 : spinnerets, ventral view.

4-6 (IV) setal rows. Basifemoral thorn setae and preening combs absent. Claws. One broad and one small tooth (I), one small tooth (IV) on paired claws, no teeth on palpal claw.

Spines. Leg 1, fe p1, d4w, pa 0, ti v3w, me 0; leg 2, fe p1, d5w, pa 0, ti p1, v2, me v1; leg 3, fe p3, d2, r2, pa p2, r1, ti p2, r2, v5, me p4, r2, v5; leg 4, fe r1, pa r1, ti p3, r3, v9, me p5, r4, v5; palp, fe p1 d3w, pa 0, ti p1 v8.

Trichobothria in two rows, each of ca. 10 on

tibiae for full length; about 15 on metatarsi; 2 small clavate and 20-25 long filiform on tarsi.

Spermathecae two, each a broad mound longer than wide with slender outer lobe apically bifurcated.

Spinnerets. PMS 0.56 long, 0.23 wide, 0.02 apart, about 0.29 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.81, 0.27, 0.19, 1.27, respectively.

**Etymology** : the specific epithet is a patronym in honour of internationally acclaimed Australian Ascidian taxonomist, Dr Patricia KOTT, Queensland Museum, whose monographic studies on Australian and other Pacific Ascidiacea came to mind in this beautiful beach location.

**Distribution and habitat** : these spiders were found in burrows in sandstone conglomerate banks at the beach front. The burrow was about 5 cm long with a thin, lichen-covered door and built into an existing tube in the rock. The species is known only from Plage de la Roche Percée.

**Material examined** : only the type.

*Encyocrypta kritscheri* n. sp.

(figs 1 & 84-91; table 12)

**Type material** : holotype ♂ : Forêt de Rivière Tindia, 250 m, NW of Farino, Austrian New Caledonian Expedition 1965, 28.VII.1965 (A. KALTENBACH), NHMW 12.417.

**Diagnosis** : maxillae with less than 13 cuspules on average of both. Males. Paired claws of leg IV with two rows of teeth. Basifemoral thorn setae and preening combs absent. Scopula of males for distal sixth of metatarsi IV; distal third of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs with distinct darker annulations. Tibia I with proventral distal spur with moderately long megaspine; upper surface of spur asetose and pallid with indistinct zone of sclerotisation; upper megaspine short straight with small thumb-like process. Bulb pyriform with long shaft and embolus with two distal spirals, one low, indistinct, the other long relatively high and distinct. Paired claws of leg IV with teeth on both lateral faces of each claw. ♀ unknown.

**Description** : holotype ♂. Carapace 7.00 long, 5.92 wide. Abdomen 6.92 long, 5.67 wide. Total length, 16. Colour in alcohol. Carapace orange brown with mottled areas on caput and interstitial ridges, chelicerae red brown, and legs yellow brown with brown femora, lateral patellae and tibiae, and proximal brown annulation on metatarsi. Abdomen dorsally with uniform large

white mottling; ventrally brown with large pallid star-like pattern and white spots near spinnerets.

**Carapace**. Pilosity : silver hairs mixed with fine brown hairs on interstitial ridges and margins; striae distinct, narrow; about 6 thick erect black and several smaller bristles beside posterior striae; about 12 anteromedially and several short beside caput; 6 long thick bristles and several finer between PME, and about 6 long thick and 8-10 finer between ALE; numerous long hairs and bristles on lateral margins. Fovea straight deep with slight longitudinal groove posteriorly.

**Eyes**. Tubercle distinct. Group is 0.43 of head-width. Back row slightly recurved. Eye group front width, back width, length, 60 : 68 : 52. MOQ front width, back width, length, 47 : 49 : 34. AME : ALE : PME : PLE, 19 : 20 : 14 : 20. AME-AME, 0.5, AME-ALE, 0.6, ALE-ALE, 1.3, PME-PLE, 0.1, PME-PME, 1.3, ALE-PLE, 1.3.

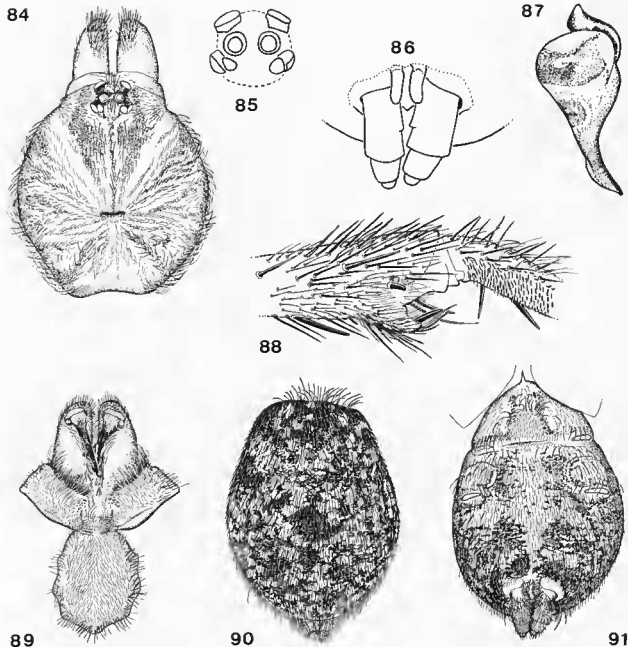
**Chelicerae**. Covered with light brown hairs and erect black bristles prodorsally, laterally with band of fine silver hairs. Rastellum absent. Furrow promargin with 10 large and one small teeth, basomesally with few small granules; one or two circular areas basally in furrow resemble broken setal bases but are not.

**Labium** 1.00 wide, 0.50 long. Labiosternal suture continuous, wide, with two contiguous sigilla. Maxillae 3.58 long in front, 5.00 long behind, 1.92 wide; with 10-11 cuspules in inner angle. Heel distinct produced; anterior lobe, distinct, angular. Sternum 3.63 long, 3.04 wide. Sigilla small oval touching margins.

TABLE 12. — Leg measurements of *Encyocrypta kritscheri*, holotype ♂

	I	II	III	IV	Palp
Femur	5.50	5.25	4.58	6.17	3.25
Palella	3.25	2.92	2.58	2.75	2.42
Tibia	3.92	3.75	3.08	5.00	2.33
Metatarsus	3.92	3.75	3.75	5.75	—
Tarsus	2.17	2.42	1.83	2.42	1.67
Total	18.76	18.09	15.82	22.09	9.67

**Legs**. Tibia I with proventral distal spur with moderately long megaspine; upper surface of spur asetose and pallid with indistinct zone of sclerotisation; upper megaspine short straight with thumb-like process. Claws. 3 (inner) to 4 (outer) teeth on paired claws of leg I, leg IV with



Figs 84-91. — *Encyocrypta kritscheri* n. sp., holotype ♂. 84 : carapace and chelicerae, dorsal view ; 85 : eye group, dorsal view ; 86 : spinnerets, ventral view ; 87 : palpal bulb, ventral view ; 88 : tibia and metatarsus I, proximal view ; 89 : sternum, maxillae, labium, and chelicerae, ventral view ; 90, 91 : abdomen, dorsal view (90), ventral view (91).

1 on inner and 4 on outer of 2 rows. Scopula. Metatarsi : I, II, full, proximally thin exposing much cuticle; distally denser, entire; III, in distal third, with mixed setae, thin; IV, in distal sixth, thin, divided into two triangles by two setal bands. Tarsi : I, II, full, dense, entire; III,

with few setae mixed but not dividing; IV, divided by setal band 4-6 wide. Basifemoral thorn setae and preening combs absent.

Spines. Leg 1, fe p1, d4, pa 0, ti p1, v5 + 2 megaspines, me v1; leg 2, fe p1, d3, r1, pa 0, ti p2, v7, me v1; leg 3, fe p1, d3, r2, pa p1, ti p2,

r2, v7, me p2, r3, v7; leg 4, fe d3, r1, pa 0, ti p3, r3, v8, me p2, r3, v9; palp, fe 1, pa 0, ti p1 v2.

Trichobothria in two rows, each of 10 for two-thirds of tibiae; about 12 on metatarsi in curving row; about 4 clavate and 12-15 filiform on tarsi.

Palp. Bulb pyriform with long shaft and embolus with two distal spirals, one low, indistinct, the other long relatively high and distinct; cymbium arched ventrally.

Spinnerets. PMS 0.60 long, 0.23 wide, 0.10 apart, about 0.44 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.90, 0.25, 0.23, 1.38, respectively.

**Etymology:** the specific epithet is a patronym in honour of the Dr E. KRITSCHER who originally worked on the material and listed it as *Idiomata meleagris*.

**Distribution and habitat:** known only from the type locality, Rivière Tindia, northwest of Farino.

**Remarks:** *E. kriticri* differs from *E. aurea* in the smaller proteral apophysis on male tibia I.

**Material examined:** only the type.

*Encyrcrypta letocarti* n. sp.

(figs 1 & 92-106; tables 13, 14)

**Type material:** holotype ♂: Rivière Blanche, Pots de Barber, parc de réadaptation des Cagous, forêt humide sur pente, XI.1986 (Y. LETOCART); allotype ♀: st 256, Rivière Blanche, parc Cagous, 160-170 m, 166°38'20" E, 22°08'09" S, I.X.1986 (A. & S. TILLIER). Both in MNHN.

**Diagnosis:** maxillae with less than 13 cuspules on average of both. Paired claws of leg IV with one row of teeth (♂), bare (♀). Basifemoral thorn setae absent. Preening combs present. In ♀, scopula in distal fifth of metatarsi IV; distal half of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs without annulations. Tibia I of males with long slender sub-distal spur and short megaspine, distal of spur cuticle is pallid and asetose, upper megaspine short, slightly curved, almost perpendicular to surface, without basal process. Palpal bulb elongate pyriform slowly tapering to short embolus with one low spiralled keel. Spermathecae

two; each a high mound with an outer slender stalk whose end is enlarged and higher than the mound.

**Description:** holotype ♂. Carapace 6.50 long, 5.42 wide. Abdomen 6.09 long, 4.17 wide. Total length, 15. Colour in alcohol. Carapace orange brown with extensive brown areas on caput and interstitial edges, chelicerae orange brown, legs yellow brown. Abdomen dorsally brown with small white spots forming two irregular lines medially; uniform, somewhat dense covering of moderately long brown hairs gives golden sheen; ventrally brown with central pallid region from anterior booklungs to spinnerets.

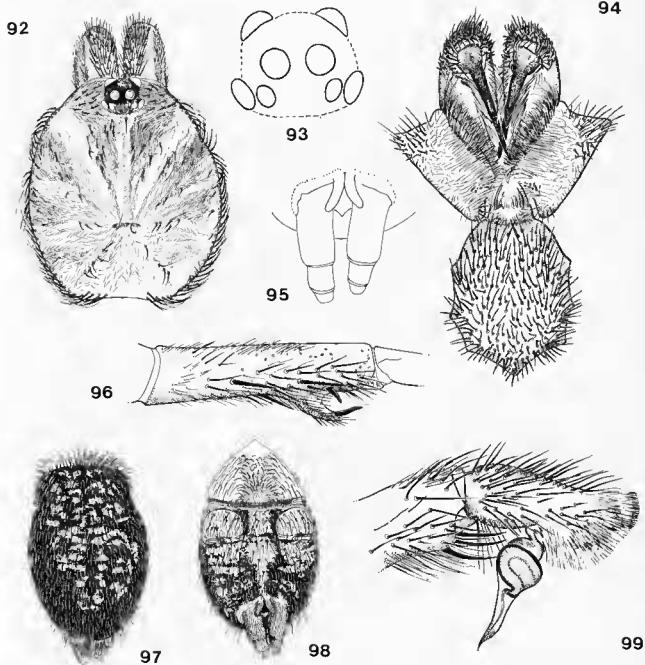
Carapace. Moderately dense covering of fine black hairs, especially on pigmented parts of carapace and along posterior margins; uniform covering of short black bristles becoming longer along posterior striae and also more numerous on posterior margins; 10-15 short black bristles anteromedially; 1 long and 10-15 shorter between PME; about 6 long and several shorter between ALE. Fovea short straight. Striae shallow, glabrous, distinct.

Eyes. Tubercle distinct. Group is 0.34 of head-width. Back row procurved. Eye group front width, back width, length, 53 : 61 : 48. MOQ front width, back width, length, 38 : 40 : 30. AME : ALE : PME : PLE, 17 : 20 : 12 : 16. AME-AME, 0.3, AME-ALE, 0.5, ALE-ALE, 1.2, PME-PLE, 0.1, PME-PME, 1.5, ALE-PLE, 1.0.

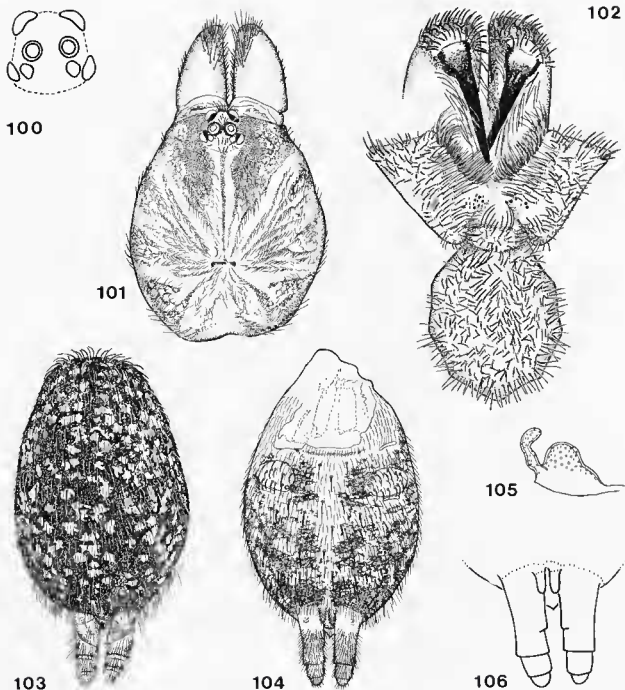
Chelicerae. Small, slender; with wide band of moderately long brown setae dorsally, mixed with long golden brown hairs; short black bristles and brown hairs laterally in wide band. Rastellum absent. Furrow promargin with 1 small and 12 large spaced teeth, basomesally with 8 small teeth and 3 small granules.

Labium 1.00 wide, 0.46 long. Labiosternal suture a narrow groove of two joined sigilla. Maxillae 1.92 long in front, 2.46 long behind, 0.96 wide; with 12-13 cuspules in inner angles. Heel slightly produced; anterior lobe, barely distinct. Sternum 3.58 long, 2.63 wide. Thickest longest setae on margins. Sigilla all small, marginal, oval.

Legs. Tibia I with long slender sub-distal spur and short megaspine, distal of spur cuticle is pallid and asetose, upper megaspine short, slightly curved, almost perpendicular to surface, without basal process. Scopula. Scopulate cuticle



FIGS 92-99 *Encyocrypta letocarti* n. sp., holotype ♂. 92 : carapace and chelicerae, dorsal view ; 93 : eye group, dorsal view ; 94 : sternum, maxillae, labium, and chelicerae, ventral view ; 95 : spinnerets, ventral view ; 96 : tibia 1, prolateral view ; 97, 98 : abdomen, dorsal view (97), ventral view (98) ; 99 : palpal tibia, cymbum, and bulb, prolateral view.



Figs 100-106. *Encyocrypta letocarti* n. sp., allotype ♀. 100 : eye group, dorsal view ; 101 : carapace and chelicerae, dorsal view ; 102 : sternum, maxillae, labium, and chelicerae, ventral view ; 103, 104 : abdomen, dorsal view (103), ventral view (104) ; 105 : spermathecae, ventral view ; 106 : spinnerets, ventral view.

pallid. Metatarsus and tarsi I, II, thin, full, entire. Metatarsi III, divided into two narrow triangles in distal one-third; IV, as on III, but triangles smaller and in one-fifth. Tarsi: III, thin, divided by band two to three setae wide; IV, thinner, setal band 3-4 setae wide. Claws, 4-5 teeth in each of two rows (I) to 1-4 teeth on medial keel (IV) on paired claws.

TABLE 13. Leg measurements of *Encyocrypta letocarti*, holotype ♂

	I	II	III	IV	Palp
Femur	5.34	4.92	4.75	6.34	3.42
Patella	3.33	3.00	2.50	2.67	2.17
Tibia	4.33	3.92	3.08	5.08	2.42
Metatarsus	3.67	3.67	4.17	6.34	
Tarsus	2.08	2.08	2.17	2.42	1.75
Total	18.75	17.59	16.67	22.85	9.67

TABLE 14. — Leg measurements of *Encyocrypta letocarti*, allotype ♂

	I	II	III	IV	Palp
Femur	3.08	3.00	2.46	3.75	2.29
Patella	2.29	1.96	1.63	2.08	1.67
Tibia	2.13	1.92	1.54	2.75	1.46
Metatarsus	1.50	1.50	2.00	3.46	
Tarsus	1.08	1.04	1.08	1.33	1.42
Total	10.08	9.42	8.71	13.37	6.84

Spines. Leg 1, fe p2, d4, pa 0, ti p2, v4 + 2 megaspines, me v1; leg 2, fe p1, d4, pa 0, ti p2, v5, me v1; leg 3, fe p3, d4, r4, pa p2, r1, ti p2, r2, v9, me p5, r3, v9; leg 4, fe p1, d5, r2, pa r1, ti p2, r5, v10, me p4, r4, v6; palp, fe p1, pa 0, ti p1, v5. Preening combs absent, represented only by group of 4 close but weak setae on retroventral metatarsi III; one of two weak on IV.

Trichobothria in two rows, each of about 9 for full length of tibiae; about 18 in curving row on metatarsi; 3 small clavate, 15-20 long, filiform on tarsi.

Palp. Bulb elongate pyriform slowly tapering to short embolus with one low spiralled keel; cymbium dimorphic.

Spinnerets. PMS 0.50 long, 0.17 wide, 0.02 apart, about 0.26 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 1.04, 0.27, 0.13, 1.44, respectively.

**Description:** allotype ♀. Carapace 5.00 long, 4.33 wide. Abdomen 5.59 long, 3.83 wide. Total length, 14. Colour in alcohol. Carapace orange brown with reticulated brown areas on interstitial ridges and on caput, chelicerae brown, legs yellow brown. Abdomen dorsally brown with numerous small white spots forming no regular pattern; ventrally brown with large pallid vee medially lateral of which are transverse pallid bands behind booklungs and in front of spinnerets.

Carapace with uniform covering of fine black bristles, absent in striae, 4 thick on posterior striae edges, 2-3 pairs of foveal bristles, about 9 thick and some finer bristles anteromedially, and numerous on caput and along its margin, 6 thick and several finer between PME, 5 thick and several finer between ALE, front margin of carapace and anterior half of lateral margins glabrous, posterior margins lightly setose. Fovea short, straight.

Eyes. Tubercle distinct. Group is 0.27 of head-width. Back row slightly procurved. Eye group front width, back width, length, 39 : 48 : 39. MOQ front width, hack width, length, 31 : 32 : 23. AME : ALE : PME : PLE, 13 : 15 : 9 : 13. AME-AME, 0.4, AME-ALE, 0.5, ALE-ALE, 1.2, PME-PLE, 0.1, PME-PME, 1.3, ALE-PLE, 1.2.

Chelicerae. Long, rounded; with light covering of black bristles and short hairs prodorsally, laterally with few hairs. Rastellum a low mound with 8-12 thick bristles on edge. Furrow promargin with 7 large mixed basally with 4 small teeth, basomesally with 7 small teeth and 10 fine granules.

Labium 0.92 wide, 0.46 long. Labiosternal suture two narrow sigilla not medially joined, Maxillae 1.46 long in front, 2.08 long behind, 1.04 wide; with about 10-14 cuspules in inner angle. Heel rounded; anterior lobe just distinct. Sternum 2.79 long, 2.21 wide. Sigilla all small, discernible with difficulty, marginal.

Legs. Basifemoral thorn setae absent. Scopula. Metatarsi & tarsi I, II, hairs short, thin, entire for full length; III, thin, two small triangles of hair in distal half; IV, similar but for distal fifth. Tarsi: III, thin, full, divided by setae 2-3 bands wide; IV, similar but 4-6 setal lines. Claws, 2 small teeth on paired claws of leg I; no teeth on leg IV or palpal claw.

Spines. No spines ventrally on legs I, II. Legs 1, fe p1, d4w, pa 0, ti 0, me 0; leg 2, fe p1, d3w, pa 0, ti 0, me 0; leg 3, fe p1, d1, r1, pa p1, ti p1,



r1, v8, me p4, r2, v9; leg 4, fe d4w, r1, pa r1, ti r2, v9, me p3, r3, v11; palp, fe pl, d3w, pa 0, ti v5. Preening combs: 1 of 2 on retro metatarsi III, 1 of 3 on IV.

Trichobothria in two rows, each of about 8 for full length of tibiae; about 15 in curving row on metatarsi; 3 small clavate and 11 long filiform on tarsi.

Spermathecae two; each a high mound with an outer slender stalk whose end is enlarged and higher than the mound.

Spinnerets. PMS 0.42 long, 0.15 wide, 0.08 apart, about 0.27 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.65, 0.31, 0.29, 1.25, respectively.

**Etymology:** the specific epithet is a patronym in honour of Yves LETOCART in recognition of his studies on the natural history of New Caledonian fauna and in whose pitfall traps the holotype was collected.

**Distribution and habitat:** *Encycripta letocarti* is known only from rainforest at the type locality, Rivière Blanche.

**Material examined:** only the types.

*Encycripta lugubris* n. sp.

(figs 1 & 107-112; table 15)

**Type material:** holotype ♀: Mt Do, sieved litter in rainforest, at about 900 m altitude, 20.V.1987 (R. J. RAVEN), QM s 4149.

**Diagnosis:** maxillae with much more than 13 cuspules on average of both. ♀. Paired claws of leg IV without teeth. Basifemoral thorn setae present. Preening combs present. Scopula absent on metatarsi IV; distal third of metatarsi III. Abdomen dorsally and ventrally dark brown without pattern. Legs without annulations. Spermathecae two, each a low inner conical mound and longer slender outer lobe. ♂ unknown.

**Description:** holotype ♀. Carapace 4.32 long, 3.66 wide. Abdomen 5.16 long, 3.46 wide. Total length, 11. Colour in alcohol. Carapace, chelicerae, and legs chocolate brown with striae of carapace darker brown. Abdomen dorsally dark brown, ventrally brown.

Carapace. Bristle numbers and positions: fine brown hairs along striae. Between ALE anteriorly to posteriorly a row of 6 bristles, a row of 3 then 1. Between PLE a group of about 10 bristles. In line between eye group and fovea 15 bristles. Flanking this, on darker pigment triangles on the head to fovea are about 20 bristles. Fovea short, straight slightly procurved.

Eyes. Group is 0.38 of head-width. Back row straight. Eye group front width, back width, length, 38 : 45 : 32. MOQ front width, back width, length, 27 : 29 : 18. AME : ALE : PME : PLE, 11 : 14 : 6 : 9. AME-AME, 0.5, AME-ALE, 0.7, ALE-ALE, 1.4, PME-PLE, 0.1, PME-PME, 1.6, ALL-PLE, 1.4.

Chelicerae. Rounded distinct with glabrous zone prodorsally to band of setae. Bristles only on prodorsal surface. Rastellum a low mound, distal setation sparse but with 8 thick curved bristles on edge. Furrow promargin with 8 large and 2 smaller teeth, basomesally with 2 small and 6-8 tiny teeth.

Labium 0.71 wide, 0.34 long. Labiosternal suture an indistinct, shallow groove, narrowing strongly at midpoint. Maxillae 1.29 long in front, 1.78 long behind, 0.79 wide; with about 27-31 cuspules in anterior lobe of heel. Sternum 2.24 long, 1.92 wide. Sigilla small, shallow, pale.

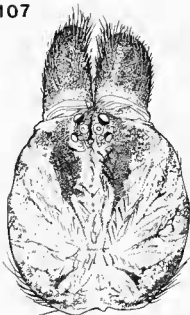
TABLE 15. — Leg measurements of *Encycripta lugubris*, holotype ♀

	I	II	III	IV	Palp
Femur	3.01	2.75	2.00	2.50	2.78
Petella	1.90	1.75	1.51	1.58	1.47
Tibia	1.57	1.64	1.34	2.13	1.14
Metatarsus	1.38	1.38	1.31	2.26	
Tarsus	1.00	0.97	0.83	1.02	1.06
Total	8.86	8.46	6.99	9.49	6.45

Legs. Basal femora I, II, IV with 5-10 fine curved thorn-like setae on prolateral face; most on femora I. Scopula. Metatarsi: I, II, thick, full; III, distal 1/3 only, centrally separated by spines; IV, absent. Tarsus: I, II, thick, full; III, relatively thick, centrally divided by 3-4 wide rows of setae; IV, full, not so dense (cuticle evident), divided centrally by a row of bristles (4 wide). Claws. 2 teeth on paired claws of leg I, no teeth on leg IV or palpal claw.

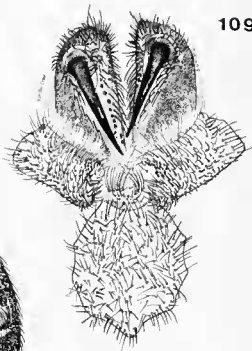
Spines. Leg 1, me v1; leg 2, me v1; leg 3, ti p1, v1, me p4, r2, v7; leg 4, fe 0, pa 0, ti v2, me p1, r1, v2; palp, 0, ti p2, v2. Preening combs: 1 of 2-3 strong setae on retroventral metatarsi III, IV.

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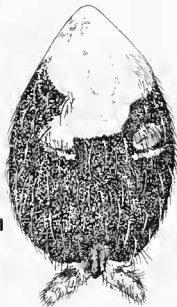


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111



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112



FIGS 107-112. — *Encyocrypta lugubris* n. sp., holotype ♀. 107: carapace and chelicerae, dorsal view; 108: eye group, dorsal view; 109: sternum, maxillae, labium, and chelicerae, ventral view; 110: spermathecae, ventral view; 111: abdomen, ventral view; 112: spinnerets, ventral view.

Trichobothria in two rows, each of 8 on tibiae for full length; about 9 in curving row on metatarsi for full length; 4 clavate and 12 filiform on tarsi.

Spermathecae two, each a low inner conical mound and longer slender outer lobe.

Spinnerets. PMS 0.39 long, 0.15 wide, 0.04 apart, about 0.36 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.65, 0.23, 0.31, 1.19, respectively.

**Distribution and habitat:** *Encyocrypta lugubris* is known only from rainforest at Mt Do, near the summit where it was collected in leaf litter.

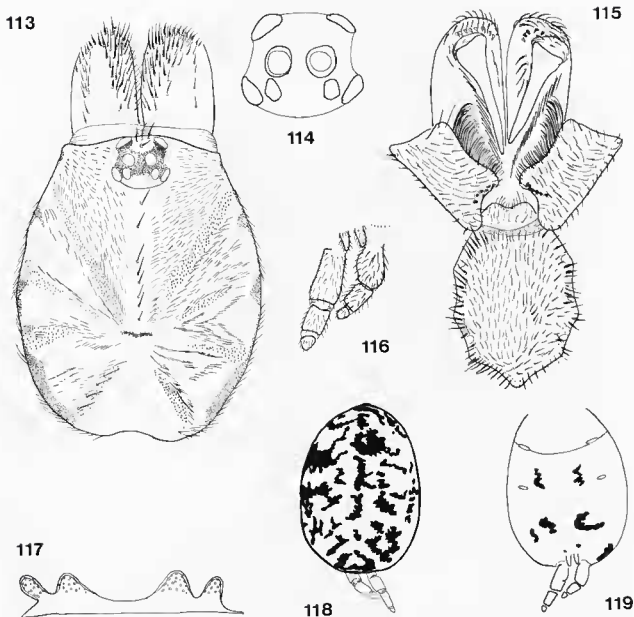
**Material examined:** only the type.

*Encyocrypta montdo* n. sp.

(figs 1 & 113-119; table 16)

**Type material:** holotype ♀: Mt Do, rainforest, at 500 m altitude, 20.V.1987 (R. J. RAVEN), QM s 4144; paratype ♀: same data, QM s 15503.

**Diagnosis:** maxillae with less than 13 cuspules on average of both. Paired claws of leg IV with teeth. Basifemoral thorn setae present, numerous. Preening combs present. Scopula absent on metatarsi IV; almost absent on metatarsi III. Abdomen dorsally with distinct fish-bone pattern. Legs without annulations. Spermathecae



Figs 113-119. — *Encycrypta montdo* n. sp., holotype ♀. 113 : carapace and chelicerae, dorsal view; 114 : eye group, dorsal view; 115 : sternum, maxillae, labium, and chelicerae, ventral view; 116 : spinnerets, ventral view; 117 : spermathecae, ventral view; 118, 119 : abdomen, dorsal view (118), ventral view (119).

consist of two similarly sized and shaped mounds.  
♂ unknown.

**Description** : holotype ♀. Carapace 4.67 long, 3.92 wide. Abdomen 5.59 long, 4.17 wide. Total length, 12. Colour in alcohol. Carapace, chelicerae, and legs light orange-brown with brown edges to carapace above coxae I, II, III. Cheli-

cerae darker. Abdomen dorsally with purple-brown patches in a broken fishbone pattern on white.

**Carapace**. Covered with fine brown hairs except between striae and especially on head region. Two lines of about 10 forward directed bristles running from posterior end of carapace to almost converge at the fovea. Line of about

12 forward directed bristles running medially between fovea and eye group. Flanking both sides of this is a group of about 12 backward directed bristles on the head. Between the ALE's a group of about 6 bristles. Fovea short, slightly procurved and medially shallow.

Eyes. Group is 0.41 of head-width. Back row straight. Eye group front width, back width, length, 42 : 49 : 34. MOO front width, back width, length, 28 : 31 : 19. AME : ALE : PMF : PLE, 9 : 15 : 7 : 11. AME-AME, 0.9, AME-ALE, 0.7, ALE-ALE, 1.6, PME-PL, 0.7, PME-PME, 1.8, ALE-PL, 1.6.

Chelicerae. Rounded, with one band of bristles; prodorsally 3-4 rows of moderately long setae; laterally an area of short fine setae. Rastellum a line of 8-10 long curved spines along edge. Furrow promargin with 10 teeth of various sizes; 5 small teeth and several granules.

Labium 0.83 wide, 0.25 long. Labiosternal suture (two small sigilla, not joined) in shallow groove. Maxillae 1.33 long in front, 1.83 long behind, 0.92 wide; with about 7-8 cuspules in inner corner. Sternum 2.42 long, 2.08 wide. Sigilla: posterior shallow indistinct; others not evident.

Legs. Femora I, II, IV with about 15, 5, and 7 basifemoral thorn setae, respectively. Scopula. Metatarsi: I, II, full, thick, entire; III, absent save for few scattered hairs; IV, absent. Tarsi: I, II, full, thick, entire; III, very sparse and divided by setal band 4-6 wide; IV, very sparse, especially proximad, two narrow bands separated by setal band 6-8 wide bristles. Claws. 3-4 teeth on paired claws of leg I, 2 on leg IV, no teeth on palpal claw.

TABLE 16. — Leg measurements of *Encyocrypta montdo*, holotype ♀

	I	II	III	IV	Palp
Femur	3.50	3.00	2.58	3.58	2.58
Patella	2.67	2.00	1.67	1.83	1.58
Tibia	2.17	1.83	1.42	2.50	1.58
Metatarsus	1.41	1.67	1.83	3.00	—
Tarsus	1.08	1.33	1.00	1.42	1.38
Total	10.83	9.83	8.50	12.33	7.07

Spines. Leg I, fe p1, d5w, pa 0, ti v6, me v1; leg 2, fe pl, d3w, pa 0, ti p1, v4, me v1; leg 3, fe p1, d1, r1, pa p1, ti p1, d1, r1, v2, me p4, r2, v8; leg 4, fe d4w, rlw, pa 0, ti r2, v8, me p3, r3, v5; palp, fe p1, pa 0, ti p1, r1, v8. Preening combs:

1 each of strong setae retroventrally on III, IV.

Trichobothria in two rows, each of 3 on tibiae; about 3 on metatarsi; 7 (4 clavate) in two rows on tarsi.

Spermathecae consist of two similarly sized and shaped mounds.

Spinnerets. PMS 0.38 long, 0.21 wide, 0.06 apart, about 0.45 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 1.00, 0.52, 0.27, 1.79, respectively.

**Distribution and habitat:** *Encyocrypta montdo* is known only from rainforest at Mt Do, at an altitude of about 500 m.

**Material examined:** only the types.

*Encyocrypta montmou* n. sp.

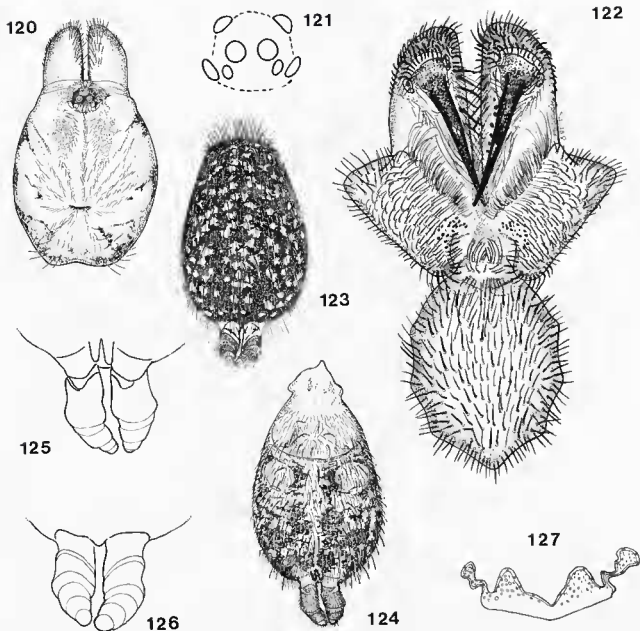
(figs 1 & 120-127; table 17)

**Type material:** holotype ♀: Mt Mou, summit, 1200 m, 24.v.1984 (G. MONTIETH & D. COOK), OM s 4148.

**Diagnosis:** maxillae with more than 13 cuspules on average of both. ♀. Paired claws of legs IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula absent on metatarsi IV; very sparse in distal sixth of metatarsi III. Abdomen dorsally with fine white spots forming vague pattern. Legs without annulations. Spermathecae two, each a low broad basal mound with thin lateral sigmoidal duct ending in enlarged sphere. ♂ unknown.

**Description:** holotype ♀. Carapace 5.59 long, 4.58 wide. Abdomen 5.92 long, 3.75 wide. Total length, 15. Colour in alcohol. Carapace orange brown with brown markings marginally, along interstitial ridges and on caput, chelicerae brown, legs yellow brown. Abdomen dorsally brown with small white mottling forming two irregular longitudinal lines medially and some diagonal lines laterally; ventrally brown with medial pallid band and paired large irregular white areas centrally and posteriorly near spinnerets.

Carapace. Few fine grey hairs along margins and interstitial ridges; fine black bristles on posterior margin, along posterior striae edges and on caput medially; about 15 anteromedial bristles plus 2 thick and 2 thinner pairs of foveal



FIGS 120-127. — *Encycyopta montmou* n. sp., holotype ♀. 120 : carapace and chelicerae, dorsal view; 121 : eye group, dorsal view; 122 : sternum, maxillae, labium, and chelicerae, ventral view; 123, 124 : abdomen, dorsal view (123), ventral view (124); 125 : spinnerets, ventral view; 126 : P.S., dorsal view.

bristles; 6 thick and numerous small bristles between PME, 4-5 long and several shorter bristles between ALE; no bristles on anterior cephalic margin. Fovea short, straight.

Eyes. Group is 0.30 of head-width. Back row slightly procurved. Eye group front width, back width, length, 41 : 50 : 36. MOQ front width, back

width, length, 28 : 33 : 22. AME : ALE : PME : PLE, 13 : 16 : 10 : 13. AME-AME, 0.3, AME-ALE, 0.5, ALE-ALL, 1.2, PME-PLE, 0.1, PME-PME, 1.3, ALE-PLE, 1.5.

Chelicerae. Long rounded; with band of long and short black bristles prodorsally; fine setae laterally not in band. Rastellum a low but distinct mound with several curved long strong

but tapering spines on edge. Furrow promargin with 1 small and 10 large separated teeth, basomesally with 3 small teeth and 10 granules.

Labium 1.08 wide, 0.46 long. Labiosternal suture a shallow groove including two sigilla. Maxillae 1.63 long in front, 2.42 long behind, 1.13 wide; with about 19-21 cuspules extending back toward produced heel; anterior lobe just distinct. Sternum 3.38 long, 2.58 wide. Sigilla shallow, marginal, oval.

Legs. With uniform light covering of long and short black bristles. Scopula. Metatarsi, tarsi I, II: moderately dense, full, entire save for setae intermixed for its length. Metatarsi III, almost absent, only two very sparse small triangles in distal quarter; IV, absent. Tarsi III, thin, divided by wide setal band 6-8 wide; IV, very thin, narrow, setal band 8-10 wide. Basifemoral thorn setae absent. Claws. I small basal and two longer teeth on paired claws of leg I, 1 long or also with 1 small tooth on leg IV; no teeth on palpal claw.

TABLE 17. Leg measurements of *Encyocrypta montmou*, holotype ♀

	I	II	III	IV	Palp
Femur	3.58	3.13	2.88	4.63	2.71
Patella	2.67	2.38	1.96	2.38	1.88
Tibia	2.50	2.33	1.75	3.50	1.71
Metatarsus	1.79	1.79	2.25	4.13	—
Tarsus	1.25	1.17	1.00	1.46	1.42
Total	11.79	10.80	9.84	16.10	7.72

Spines. Leg 1, fe p1, pa 0, ti v1w, me v1; leg 2, fe p1, pa 0, ti v2w, me v1; leg 3, fe p1, d1, r1 (all weak), pa p2, r1, ti p2, r1, v9, me p4, r4, v7; leg 4, fe d2w, r1w, pa r1, ti r2, v8, me p3, r3, v12; palp, fe plw d4w, pa 0, ti p2 v3. Preening combs: 1 of 2 on metatarsi III, 1 of 4 strong on IV, both retroventral.

Trichobothria in two rows, each of about 9 for full length of tibiae; about 18 on metatarsi; 3 small clavate and about 14 long filiform on tarsi.

Spermathecae two, each a low broad basal mound with thin lateral sigmoidal duct ending in enlarged sphere.

Spinnerets. PMS 0.39 long, 0.17 wide, 0.04 apart, about 0.29 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.71, 0.46, 0.17, 1.33, respectively.

**Distribution and habitat:** *Encyocrypta montmou* is known only from rainforest at the type locality, Mt Mou.

**Material examined:** only the type.

*Encyocrypta neocaledonica* n. sp.

(figs 1 & 128-135; table 18)

**Type material:** holotype ♂: New Caledonia, in vial with syntypes of *Encyocrypta melcaigris* but not a type (see discussion under that species), MNHN 4.669.

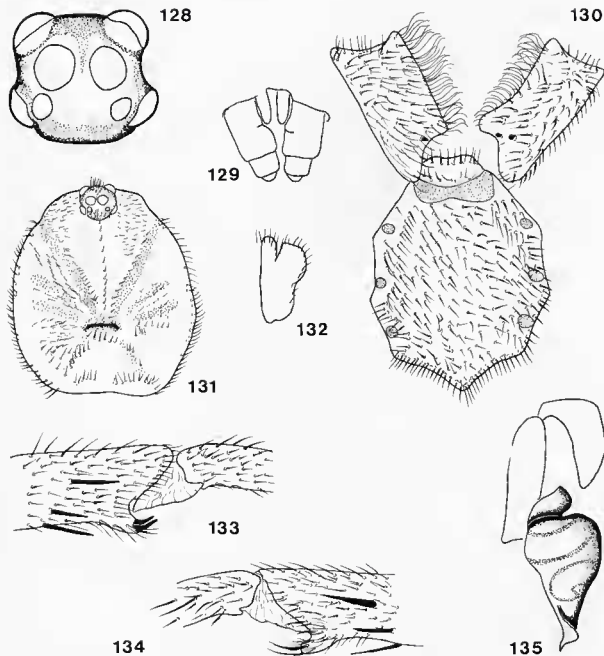
**Diagnosis:** maxillae with less than 13 cuspules (only 2) on average of both. ♂. Paired claws of leg IV with 2 rows of teeth. Basifemoral thorn setae absent. Preening combs present. Scopula present in distal quarter of metatarsi IV; distal third of metatarsi III. Abdomen dorsally with white spots forming no pattern. Tibia I with distal proventral spur bearing two thick and two thinner megaspines or just a process with one long thin megaspine. Palpal bulb with short embolus and keel. ♀ unknown.

**Description:** holotype ♂. Carapace 6.56 long, 5.84 wide. Abdomen 8.64 long, 7.92 wide. Total length, 18. Colour in alcohol. Carapace orange brown with darker caput except for anteromedian line. Abdomen dorsally with white mottling and forming chevrons irregularly on brown dorsum; ventrally brown posteriorly, anteriorly yellowish brown.

Carapace. Bristles: ca. 6 in front of ALE; 3 long in front of AME; uniform covering of long and short bristles in lines along striae edges, more numerous straight grey hairs. Clypeus absent. Margins with several bristles criss-crossed. Chitinous lower "shelf" also with bristles.

Eyes. Occupy 0.39 of head-width. Tubercle distinct, raised. Ratio of AME: ALE: PME: ALE: PLE: 18: 20: 11: 19. MOQ front: back: long, 37: 40: 30; MOQ back/front, 1.08, back/long, 1.33. Back row slightly procurved. Eye group front: back: long, 55: 60: 47. Eye interspaces (as AME diameters): AME-AME, 0.3, AME-ALE, 0.3, ALE-ALE, 1.2, ALE-PLE, 0.9, PME-PLE, 0.1, PME-PME, 1.1.

Chelicerae. Rastellum absent; low mound, with long curved bristles. Promargin of furrow with 7 large and 4 smaller teeth; basomesally



Figs 128-135. *Encyocrypta neocaledonica* n. sp., holotype ♂. 128: eye group, dorsal view; 129: spinerets, ventral view; 130: sternum, maxillae, labium, and chelicerae, ventral view; 131: carapace and chelicerae, dorsal view; 132: palpal cymbium, dorsal view; 133: dorsal left tibia and metatarsus I, prolateral view; 134: dorsal right tibia and metatarsus I, prolateral view; 135: palpal cymbium and bulb, ventral view.

with 4 small granules. Bristles and hairs in dorsal ridge and smaller lateral ridge.

Labium 0.52 long, 1.08 wide; labiosternal suture a broad shallow groove. Maxillae 1.80 long in front, 2.52 long behind, 1.12 wide; with 1-2 cuspules on inner angle. Anterior lobe barely differentiated. Sternum 3.36 long, 2.88 wide. All sigilla oval, 0.20-0.24 long, and touching margin. Hairs only on anterior to mid-margins; bristles off edge posteriorly.

Legs. Tibia I with distal proventral spur bearing two thick and two thinner megaspines or just a process with one long thin megaspine. Scopula. Tarsi I-III, entire thin, divided by 2-3 rows of setae on IV. Metatarsi, I in distal 2/3, entire; II, distal 1/2, entire; III, distal 1/3, divided; IV, distal 1/4, scattered clumps. Claws. Leg I with 6 teeth in each of two divergent juxtaposed rows; legs IV, outer rows proximal each with 2 teeth, inner rows distal with 4 teeth.

TABLE 18. Leg measurements of *Encyocrypta neocaledonica*, holotype ♂

	I	II	III	IV	Palp
Femur	6.00	5.44	5.00	6.56	3.60
Patella	3.20	3.12	2.80	2.88	2.24
Tibia	4.40	4.00	3.76	5.12	2.16
Metatarsus	4.00	4.16	4.46	6.72	—
Tarsus	2.24	2.24	2.16	2.64	1.44
Total	19.84	18.96	18.18	23.92	9.44

Spines. Leg 1, fe p2 d5, pa 0, ti p1 v6, me p1. Leg 2, fe p2 d4, pa 0, ti p2 v2, me v2. Leg 3, fe p3 d5 r4, pa p2 r2, ti p2 r2 v7, me p4 r3 v5. Leg 4, fe p3 d4 r3, pa 0, ti p2 r2 v8, me p5 r4 v12. Palp, fe p1 d3, pa 0, ti p1. Preening combs on metatarsi: III, 3 setae in line retrolaterally; IV, 3 setae in line retrolaterally.

Trichobothria. Tibiae with 10 for full length; metatarsi with ca. 10-12 in curving row; tarsi with divided band of 15 filiform and 5 clavate.

Spinnerets. PMS 0.52 long, 0.16 wide, 0.20 apart, and about 0.45 of basal PLS. Basal, middle, apical, and total articles of PLS 0.92, 0.72, 0.08, 1.72 long, respectively.

Palp. Bulb with short embolus and keel.

**Distribution and habitat:** the type locality of *Encyocrypta neocaledonica* is unknown, save for being somewhere in New Caledonia.

**Material examined:** only the type.

**Remarks:** as discussed above under *E. meleagris*, this male was subsequently added to the vial of syntypes and had no status until this paper. There is clear indication that it is neither *E. meleagris* nor *E. cagou*; it has only two cuspules on the maxillae, far less than any other species in New Caledonia. It is described here only because it presents a complete palp and tibia I and that, it is hoped, will allow eventually the identification of its type locality.

*Encyocrypta niaouli* n. sp.

(figs 1 & 136-142; table 19)

**Type material:** holotype ♀; Col de Boa, Niaouli-Wald, [165°15' E, 21°17' S], Austrian New Caledonian Expedition 1965, 11.VIII.1965 (A. KALTENBACH), NHMW 12.419.

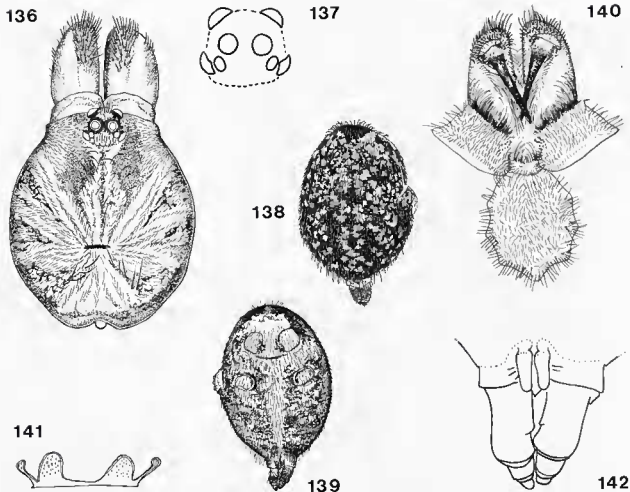
**Diagnosis:** maxillae with less than 13 cuspules on average of both. ♀. Paired claws of leg IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula in distal sixth of metatarsi IV; distal third of metatarsi III. Abdomen dorsally with large white areas forming slight pattern. Legs with distinct darker annulations. ♂ unknown.

**Description:** holotype ♀. Carapace 7.00 long, 5.83 wide. Abdomen 10.59 long, 7.64 wide. Total length, 21. Colour in alcohol. Carapace orange brown with brown markings on caput and brown reticulations on interstitial ridges, chelicerae red brown, and legs orange brown with distinct brown annulations on distal femora and patellae, proximal and distal tibiae, and mid-metatarsi. Abdomen dorsally brown with numerous distinct white areas forming slight pattern; ventrally light brown with long pallid medial vee and laterally with faint brown mottling.

Carapace. Uniform covering of fine brown hairs, longest on posterior corners; striae distinct, hirsute; 4 long thick erect black bristles beside posterior striae; 9 thick anteromedially and 5-6 pairs beside caput; 8 long thick bristles and 6-18 finer between PME, and 8 long thick and 4-6 finer between ALE. Fovea straight.

Eyes. Tubercle distinct. Group is 0.38 of head-width. Back row slightly recurved. Eye group front width, back width, length, 59 : 71 : 52. MOQ front width, back width, length, 46 : 51 : 29. AME :





FIGS 136-142. — *Encycyrypta niaouli* n. sp., holotype ♀. 136: carapace and chelicerae, dorsal view. 137: eye group, dorsal view; 138, 139: abdomen, dorsal view (138), ventral view (139); 140: sternum, maxillae, labium, and chelicerae, ventral view; 141: spermathecae, ventral view; 142: spinnerets, ventral view.

ALE : PME : PLE, 19 : 20 : 12 : 20. AME-AME, 0.4. AME-ALE, 0.5, ALE-ALE, 1.3, PME-PLE, 0.1, PME-PME, 1.7. ALE-PLE, 1.1.

Chelicerae. Covered with long erect brown bristles prodorsally, laterally with fine brown hairs. Rastellum absent but mound rounded with long strong bristles. Furrow promargin with 8 large and 3 small teeth, basomesally with 6 small teeth.

Labium 1.42 wide, 0.63 long. Labiosternal suture a shallow depression of two sigilla medially confluent. Maxillae 2.13 long in front, 2.88 long behind, 1.21 wide; with about 11-12 cuspules in inner angle. Heel rounded; anterior lobe, small, indistinct. Sternum 3.75 long, 3.08 wide. Sigilla all small marginal.

Legs. Basifemoral thorn setae absent. Scopula. Metatarsi: I, II, full, dense, entire; III, thin, in distal third, divided by setal band 2-4 wide; IV, two small triangles in distal sixth. Tarsi: I, II,

TABLE 19. — Leg measurements of *Encycyrypta niaouli*, holotype ♀

	I	II	III	IV	Palp
Femur	4.67	3.92	2.75	4.92	3.33
Patella	3.00	2.83	2.33	3.00	2.17
Tibia	2.92	2.50	2.17	3.38	1.92
Metatarsus	2.33	2.42	2.58	4.42	
Tarsus	1.50	1.42	1.25	1.50	2.08
Total	14.42	13.09	11.08	17.22	9.50

full, dense, entire; III, divided by setal band 2-3 wide; IV, divided by setal band 4-6 wide. Claws. 2-3 teeth on paired claws of legs I, IV; no teeth on palpal claw.

Spines. Leg I, fe p1, d2w, pa 0, ti 0, me 0; leg 2, fe p1, d3w, pa 0, ti p2, v2w, me v1; leg 3, fe p3, d4, r3, pa p2, r1, ti p2, r2, v7, me p3, r3, v4; leg 4, fe d1, r1, pa r1, ti r2, v10, me p3, r3, v6; palp, fe pl, pa 0, ti p2, v7. Metatarsal preening combs: 1 of 3 strong setae on retroventral III, IV.

Trichobothria in two rows, each of 9 for three-fourths of tibiae; about 15 on metatarsi in curving row; about 22 filiform on tarsi.

Spermathecae two, each a triangular mound with slender outer lobe with spheroidal apex.

Spinnerets. PMS 0.63 long, 0.25 wide, 0.10 apart, about 0.39 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 1.23, 0.42, 0.19, 1.83, respectively.

**Distribution and habitat:** *Encyocrypta niaouli* is known only from the type locality, Col de Boa, Niaouli-Wald.

**Material examined:** only the type.

**Remark:** this material was listed as *Idiommatia meleagrís* by KRITSCHER (1966).

*Encyocrypta oubatche* n. sp.  
(figs 1 & 143-149; table 20)

**Type material:** holotype ♀: Oubatche, closed forest near creek, 1.XI.1988 (R. J. RAVEN). QM 5 15465.

**Diagnosis:** maxillae with less than 13 cuspules on average of both. ♀. Spermathecae two, each a low domed inner mound with more slender longer outer lobe with expanded apex. Paired claws of leg IV with teeth. Basifemoral thorn setae and preening combs absent. Scopula absent on metatarsi IV; distal third of metatarsi III. Abdomen dorsally with white mottling defining brown medial vee. Legs with distinct darker annulations. Uniform covering of fine grey hairs on cephalothorax. ♂ unknown.

**Description:** holotype ♂. Carapace 4.63 long, 4.04 wide. Abdomen 5.25 long, 3.75 wide. Total length, 11. Colour in alcohol. Carapace orange

brown with brown margins and reticulations on interstitial ridges, large brown area on caput; chelicerae orange brown; legs orange brown with brown annulations on distal femora, and patella, proximal and distal tibia, and proximal metatarsi. Abdomen dorsally brown with white mottling defining medial V and fine diagonal lines; ventrally pallid with brown markings posteriorly.

Carapace. With light covering of fine grey hairs; 5-7 long erect black bristles in posterior striae; 2 long foveal bristles and 2-3 fine pairs anteriorly. 6-8 fine anteromedial setae; fine black setae on caput; 1 long and several shorter bristles between AME; striae distinct. Fovea short, straight.

Eyes. Group is 0.29 of head-width. Back row procurved. Eye group front width, back width, length, 47 : 55 : 39. MOQ front width, back width, length, 35 : 36 : 25. AME : ALE : PME : PLE, 16 : 16 : 8 : 13. AME-AME, 0.3, AME-ALE, 0.6, ALE-ALE, 1.2, PME-PLA, 0.1, PME-PME, 1.3, ALE-PLA, 1.1.

Chelicerae rounded, moderately long black bristles on prodorsal surface, finer setae laterally. Rastellum absent. Furrow promargin with 10 large and 3 tiny teeth; basomesally with 6 small and several minute granules.

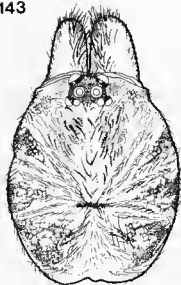
Labium 0.79 wide, 0.38 long. Labiosternal suture is two sigilla medially confluent. Maxillae 1.33 long in front, 1.92 long behind, 0.92 wide; with 9-10 cuspules. Heel rounded; anterior lobe, indistinct. Sternum 2.83 long, 2.08 wide. Sigilla all small, oval, marginal.

Legs. Femora clothed with hairs and bristles; elsewhere only bristles. Scopula. Metatarsi and tarsi I, II, full, entire; metatarsi III, very sparse, ca. 40-50 hairs divided in distal third; metatarsi IV, absent; tarsi III, parted by 10-15 setae in irregular band; tarsi IV, with 3-4 bands of setae parting thin scopula with equal amounts on both faces. Basifemoral thorn setae and preening combs absent. Claws. 3 teeth on paired claws,

TABLE 20. — Leg measurements of *Encyocrypta oubatche*, holotype ♀

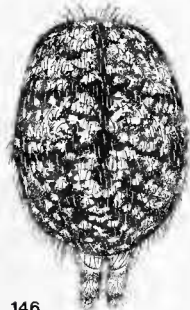
	I	II	III	IV	Palp
Femur	3.56	2.95	2.52	4.08	2.26
Patella	2.34	2.00	1.74	2.17	1.74
Tibia	2.08	1.74	1.74	2.52	1.30
Metatarsus	1.65	1.65	1.91	3.21	
Tarsus	1.04	1.22	0.96	1.39	1.48
Total	10.67	9.56	8.87	13.37	6.78

143

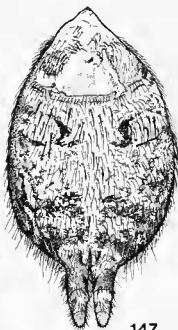


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149

FIGS 143-149. *Encycrypta oubatche* n. sp., holotype ♀. 143 : carapace and chelicerae, dorsal view ; 144 : eye group, dorsal view ; 145 : sternum, maxillae, labium, and chelicerae, ventral view ; 146, 147 : abdomen, dorsal view (146), ventral view (147) ; 148 : spinnerets, ventral view ; 149 : spermathecae, ventral view.

teeth smaller on IV than I, no teeth on palpal claw, concealed by tuffs.

Spines. Leg 1, fe p1, d4, pa 0, ti 0, v3w, me 0, v1 or v0; leg 2, fe p1, d3, pa 0, ti p2, v2, me v1; leg 3, fe p2, d4, r2, pa p2, r1, ti p2, r2, v6, me p4, r2, v5; leg 4, fe d4, r1, pa r1, ti r2, v0, me p3, r3, v8; palp, fe p1, d5w, pa 0, ti p2, v7.

Trichobothria in two rows, each of 10 on tibiae for 3/4; about 6-8 discernible with difficulty on metatarsi; 3 clavate and 18 filiform on tarsi in broad band.

Spermathecae two, each a low domed inner mound with more slender longer outer lobe with expanded apex.

Spinnerets. PMS 0.42 long, 0.19 wide, 0.06 apart, about 0.35 of basal pls in diameter. pls length of basal, middle, apical, and total articles 0.63, 0.29, 0.27, 1.19, respectively.

**Distribution and habitat:** *Encyocrypta oubatche* is known only from a small creek just south of the village of Oubatche. Spiders made tubes about 1-1.5 meters above the ground in large paper bark trees. When disturbed, the spider leapt from the burrow into the air. Other smaller immature spiders were found in burrows in the earth beside a creek; they may be conspecific.

**Material examined:** only the type.

**Remark:** *Encyocrypta oubatche* is the only *Encyocrypta* species in New Caledonia known to be arboriphilic.

*Encyocrypta panie* n. sp.

(figs 1 & 150-163; tables 21-22)

**Type material:** holotype ♂: Mt Panié, rainforest, 1300-1600 m, 15.v.1984 (G. MONTEITH & D. COOK), QM s 4143; allotype ♀: Mt Panié, 1300 m, *Agathis montana* forest, under bark and moss, 3.x.1988 (R. J. RAVEN), QM s 15466; 1 paratype ♀, 1 juv.: Mt Panié, *Agathis montana* forest, 1300 m, 3.xi.1988 (T. B. CHURCHILL), QM s 15484; 1 paratype ♀: Mt. Panié, under bark in *Agathis montana* forest, 3.xi.1988 (R. J. RAVEN), QM s 15468; 1 paratype ♀: Mt. Panié, st 295, berlese trap, maquis alt. *Agathis*, summit 1620 m, 19.xi.1986 (J. CHAZEAU, A. & S. TILLIER), MNHN; 3 paratypes ♀, one juv ♂, 3 juv.: Mt Panié, 1628 m, 15.v.1984 (G. MONTEITH & D.

COOK), QM s 7131; 1 paratype ♀, 3 juv.: Mt Panié, *Agathis montana* forest, under moss and bark, 1300 m, 3.xi.1988 (T. B. CHURCHILL), QM s 15485.

**Diagnosis:** male without upper process on tibia I. ♀ spermathecae, two, each a raised triangular mound with short straight lateral lobe and apical expansion. Maxillae with more than 13 cusplules on average of both. Paired claws: ♂, leg IV with one row of teeth; ♀, leg IV with one tooth. Basifemoral thorn setae and preening combs absent. Scopulae. ♂: absent on metatarsi IV; distal on metatarsi III. ♀: almost absent on metatarsi IV, in distal quarter of metatarsi III. Abdomen dorsally brown with fine white spots forming no pattern. Legs without annulations.

**Description:** holotype ♂, QM s 4143. Carapace 5.20 long, 4.24 wide. Abdomen damaged. Colour in alcohol. Carapace and chelicerae red brown, legs and sternum orange brown. Dorsally abdomen with white mottling; ventrally pallid with dark brown band behind booklungs. Legs not annulated.

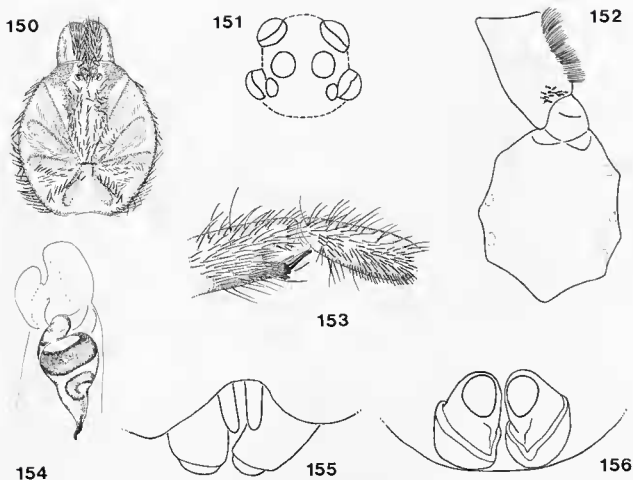
Carapace. With light covering of golden hairs, denser on margins. Interstitial ridges also with short, black bristles, longer on margin. Striae distinct. Fovea short, transverse, slightly procurved. Line of 10-12 anteromedian bristles. Numerous bristles between PME, few long between ALE. Clypeus absent.

Eyes. Group is 0.42 of head-width. Three rows; back row recurved. Eye group front width, back width, length, 34 : 46 : 32. MOO front width, back width, length, 25 : 28 : 18. AME : ALE : PME : PLE, 11 : 12 : 7 : 11. AME-AME, 0.5, AME-ALE, 0.7, ALE-ALE, 1.2, PME-PLE, 0.2, PME-PME, 1.6, ALE-PLE, 1.2.

Chelicerae. Small; long brown bristles dorsally mixed with silver hairs. Rastellum an area of long curved bristles. Furrow promargin with 6 large and 3 small teeth; basomesally with 10-15 fine pointed granules.

Labium 0.68 wide, 0.36 long. Labiosternal suture a wide groove. Cusplules absent. Maxillae 1.40 long in front, 1.84 long behind, 0.80 wide; with about 20 thick but pointed cusplules. Heel angular; anterior lobe, rounded. Sternum 2.72 long, 2.24 wide. Sigilla, 6, all oval, marginal.

Legs. All similar size but I-III clearly thicker than IV. With light covering of golden hairs and



FIGS 150-156. — *Encycrypta panie* n. sp., holotype ♂. 150: carapace and chelicerae, dorsal view; 151: eye group, dorsal view; 152: sternum, maxillae, labium, and chelicerae, ventral view; 153: tibia and metatarsus I, prolateral view; 154: palpal tibia, cymbium, and bulb, ventral view; 155: spinnerets, ventral view; 156: rts. dorsal view

long bristles. Tibia I with conical proventral spur and long megaspine but no opposing process prolaterally. Claws, 6 short teeth in each of two rows set high and at about the midlength of paired claws of leg I; claws of leg IV similar in size to those of leg I but with 3-4 teeth on outer faces only. Claw tufts smaller than claws. Scopula dense but cuticle not obscured. Metatarsus: I entire, in distal two-thirds; II, entire, in distal half; III, only two sparse clusters distally; IV, absent. Tarsus: I, entire, full length; II, full, with ventral line of setae but scopula not parted by them; III, thin, parted by band of setae 4-5 rows wide; IV, thin, parted by wide band of setae forming two lateral bands for distal two-thirds. Basifemoral thorn setae absent. Preening combs absent.

TABLE 21. — Leg measurements of *Encycrypta panie*, holotype ♂

	I	II	III	IV	Palp
Femur	3.20	2.96	2.88	4.32	2.04
Patella	2.08	2.08	1.84	2.16	1.52
Tibia	2.32	2.32	2.00	3.04	1.44
Metatarsus	1.68	1.84	2.40	4.00	
Tarsus	1.36	1.28	1.28	1.60	0.96
Total	10.64	10.48	10.40	15.12	5.96

Spines. Leg 1, fe p1, d4, pa 0, ti p1, v3 + megaspine, me v1; leg 2, fe p1, d3, pa 0, ti p2, v6, me p1, v1; leg 3, fe p3, d2, r2, pa p3, r1, ti p4, r2, v6, me p3, r2, v8; leg 4, fe d4, r1, pa r1, v1, ti p5, r3, v10, me p4, r4, v10; palp, ti p2.

Trichobothria in two rows, each of about 10

on tibiae for three-quarters of length; about 14 in curving row on metatarsi; about 4 clavate and 9 filiform in band on tarsi.

Palp. Bulb pyriform with very gradual embolic origin; embolus tip with slight keel subapically.

Spinnerets. PMS 0.32 long, 0.10 wide, 0.06 apart, about 0.26 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.38, 0.18, 0.12, 0.68, respectively.

**Description:** ♀ allotype. Carapace 4.61 long, 4.43 wide. Abdomen 6.07 long, 4.51 wide. Total length, 12. Colour in alcohol. Carapace orange brown with brown markings on caput, lateral margins and interstitial ridges; chelicerae dark brown; legs yellow brown. Abdomen dorsally blue brown with numerous white spots not forming patterns; ventrally predominantly pallid with irregular brown areas posteriorly, centrally and between booklungs.

Carapace. Bristle numbers and positions: long fine grey hairs along interstitial ridges, along margins, absent on front margin; long posteriorly directed bristles on caput in pigmented zone; 1 long pair of foveal bristles and several finer pairs, about 12 thick and several finer setae anteromedially, 3 long and several shorter setae in posterior striae; 4 thick and 5-6 fine between anterior eye group; 4 thick and 10 finer between PME. Fovea slightly procurved. Striae distinct.

Eyes. Group is 0.29 of head-width. Two rows, back row slightly recurved. Eye group front width, back width, length, 35:45:33. MOQ front width, back width, length, 28:30:18. AME:ALE: PME:PLE, 11:12:8:13. AME:AME, 0.6, AME:ALE, 0.6, ALE:ALE, 1.0, PME:PLE, 0, PME:PME, 1.5, ALE:PLE, 1.4.

Chelicerae. Small, rounded; line of long thick mixed with band of shorter setae on prodorsal surface. Rastellum a low mound with a line of 10-15 moderately short thick curved bristles. Furrow promargin with 10 teeth, basomesally with 8 small teeth.

Labium 0.92 wide, 0.41 long. Labiosternal suture two separate sigilla meeting in narrow groove. Maxillae 1.33 long in front, 1.92 long behind, 0.96 wide; with 14-15 cuspules in inner area. Heel produced; anterior lobe, indistinct. Sternum 2.83 long, 2.17 wide. Sigilla small, indistinct, marginal. Setae slightly thicker on margin.

Legs. Uniform light covering of brown hairs.

TABLE 22. — Leg measurements of *Encyocrypta panie*, allotype ♀

	I	II	III	IV	Palp
Femur	2.42	2.67	2.50	3.58	2.00
Putella	2.17	2.00	1.67	1.00	1.30
Tibia	1.75	1.67	1.54	2.50	1.33
Metatarsus	1.25	1.25	1.79	4.34	
Tarsus	1.08	1.00	0.79	1.08	1.33
Total	8.67	8.59	8.29	13.50	6.16

Claws. Paired claws with 2-3 teeth on I, only 1 on IV, no teeth on palpal claw. Scopula. Metatarsus and tarsus: I, II, entire, full; metatarsus III, two sparse groups in distal quarter; metatarsus IV, vestigial to absent; tarsus III, thin, divided by wide band 6-8 setal bands wide; tarsus IV similar but dividing band wider.

Spines. Leg I, fe plw, d7w, pa 0, ti 0, me 0; leg 2, fe plw, d4w, pa 0, ti 0, me 0; leg 3, fe plw, d3w, rlw, pa p3, r1, ti p3, r2, v6, me p4, r2, v7; leg 4, fe d3w, rlw, pa r1, vl, ti p4, r2, vl, me p3, r3, vl0; palp, fe 0, pa 0, ti p3, v2. Preening combs absent.

Trichobothria. 10 in 2 rows, each of 8-10 on tibiae for 3/4; about 15 in curving row on metatarsi; 4 clavate and 10 filiform on tarsi.

Spinnerets. PMS 0.31 long, 0.13 wide, 0.04 apart, about 0.25 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.71, 0.17, 0.04, 0.92, respectively.

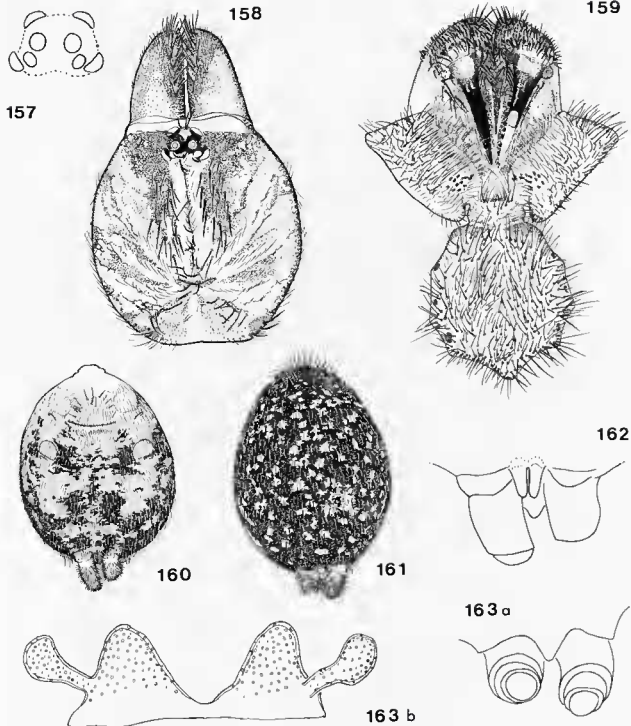
Spermathecae. Two, each a raised triangular mound with short straight lateral lobe and apical expansion.

**Distribution and habitat:** *Encyocrypta panie* is known only from Mt Panié at an altitude of 1300 m where it was found under moss and in and under rotting logs. Silken tubes followed a sinuous path in the moss extending several centimetres without side shafts. Spiders also built soft silken enclosures in litter and under logs.

**Material examined:** only the types.

*Encyocrypta tindia* n. sp.  
(figs 1 & 164-170; table 23)

**Type material:** holotype ♀: Forêt de Rivière Tindia, NW of Farino, 250 m, Austrian New Caledonia Expedition 1965, 28.vii.1965 (A. KALTENBACH), NHMW 12.417.



Figs 157-163. — *Encyocrypta pane* n. sp., allotype ♂. 157 : eye group, dorsal view ; 158 : carapace and chelicerae, dorsal view ; 159 : sternum, maxillae, labium, and chelicerae, ventral view ; 160, 161 : abdomen, dorsal view (160), ventral view (161) ; 162 : spinnerets, ventral view ; 163a : PLS, dorsal view ; 163b : spermathecae, ventral view.

**Diagnosis:** maxillae with less than 13 cusplules on average of both. ♀. Paired claws of legs IV with teeth. Basifemoral thorn setae absent. Preening combs present. Scopula in distal quarter of metatarsi IV; distal third of metatarsi III. Abdomen dorsally with fine white spots forming weak pattern. Legs without annulations. Spermathecae two, each a pair of deeply divided lobes; inner lobe about 2-3 times width of outer but equal in length. ♂ unknown.

**Description:** holotype ♀. Carapace 7.59 long, 6.42 wide. Abdomen 9.67 long, 6.92 wide. Total length, 19. Colour in alcohol. Carapace orange brown, chelicerae red brown, and legs red brown without pattern. Abdomen dorsally pallid with narrow irregular brown areas anteriorly becoming larger posteriorly; ventrally almost completely pallid with two small brown marks on inner edges of booklungs, near spinnerets and large paired band in front of them.

Carapace. Pilosity: light covering of fine brown bristles and grey hairs; striae distinct, narrow; 4-6 erect black bristles beside posterior striae; about 6 thick and few finer anteromedially and few fine bristles beside caput; 3 long thick bristles and several finer between PME, and one long thick and few finer between ALE; fine brown bristles and hairs on lateral margins. Fovea very slightly procurved.

Eyes. Tubercle distinct. Group is 0.33 of head-width. Back row slightly procurved. PME fused to different extents to PLE. Eye group front width, back width, length, 54 : 68 : 53. MOQ front width, back width, length, 41 : 47 : 30. AME : ALE : PME : PLE, 19 : 20 : 13 : 17. AME-AME, 0.3, AME-ALE, 0.6, ALE-ALE, 1.2, PME-PLE, 0.1, PME-PME, 1.5, ALE-PLE, 1.2.

Chelicerae. Covered lightly with moderately long black bristles prodorsally, laterally glabrous. Rastellum absent. Furrow promargin with 10 teeth, basomesal teeth obscured by long dense brush of hair.

Labium 1.29 wide, 0.75 long. Labiosternal suture two sigilla separated by narrow groove. Maxillae 2.21 long in front, 3.21 long behind, 1.38 wide; with about 6-8 cusplules in inner angle. Heel rounded; anterior lobe, indistinct. Sternum 4.13 long, 3.42 wide. Sigilla all small, marginal.

Legs. Basifemoral thorn setae absent. Scopula. Metatarsi : I, II, full, dense, entire; III, thin, in

TABLE 23. — Leg measurements of *Encyocrypta tindia*, holotype ♀

	I	II	III	IV	Palp
Femur	5.84	5.08	4.17	5.59	4.25
Patella	3.75	3.08	2.80	2.92	2.58
Tibia	3.83	3.67	2.75	3.83	2.75
Metatarsus	3.42	3.00	3.17	4.92	—
Tarsus	1.92	1.58	1.75	2.42	2.58
Total	18.76	16.41	14.34	19.68	12.16

distal third, divided by setal band 4-6 wide; IV, two narrow lines in distal quarter, divided by wide setal band. Tarsi : I, II, full, dense, entire; III, divided by setal band 4-6 wide; IV, divided by setal band 6-8 wide. 10-15 fine basifemoral thorn setae on femora I, II, and IV. Claws, 4 moderately long teeth on equally sized paired claws of legs I, IV, no teeth on small palpal claw.

Spines. Leg 1, fe p1, d4w, r1w, pa 0, ti p2, v5, me v1; leg 2, fe p2, d2w, r2w, pa p1, ti p2, v3, me v1; leg 3, fe p1, d1, r5w, pa p1, ti p4, r2, v9, me p4, r3, v13; leg 4, fe d2w, r2, pa 0, ti p1, r2, v10, me p4, r4, v13; palp, fe p1, pa 0, ti p2, v9. Metatarsal preening combs : 1 each of 2-4 setae on retroventral III, IV.

Trichobothria in two rows, each of about 12 for two-thirds of tibiae; about 10-15 on metatarsi in strongly curving row; about 6 clavate and 20-30 filiform on tarsi in divided band.

Spermathecae two, each a pair of deeply divided lobes; inner lobe about 2-3 times width of outer but equal in length.

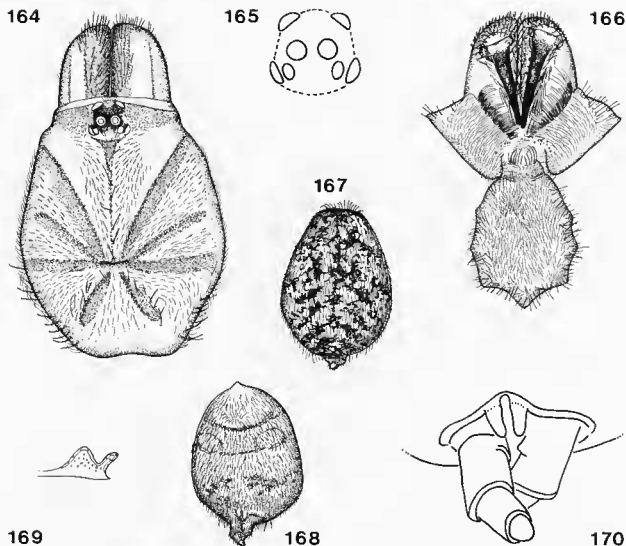
Spinnerets. PMS 0.69 long, 0.25 wide, 0.19 apart, about 0.40 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.90, 0.56, 0.35, 1.81, respectively.

**Distribution and habitat:** *Encyocrypta tindia* is known only from the type locality, Rivière de Tindia.

**Material examined:** only the type.

**Remark:** this material was listed as *Idiommatia meleagraris* by KRITSCHER (1966).





FIGS 164-170. — *Encyocrypta tindla* n. sp., holotype ♀. 164 : carapace and chelicerae, dorsal view; 165 : eye group, dorsal view; 166 : sternum, maxillae, labrum, and chelicerae, ventral view; 167, 168 : abdomen, dorsal view (167), ventral view (168); 169 : spermathecae, ventral view; 170 : spinnerets, ventral view.

*Encyocrypta tillieri* n. sp.

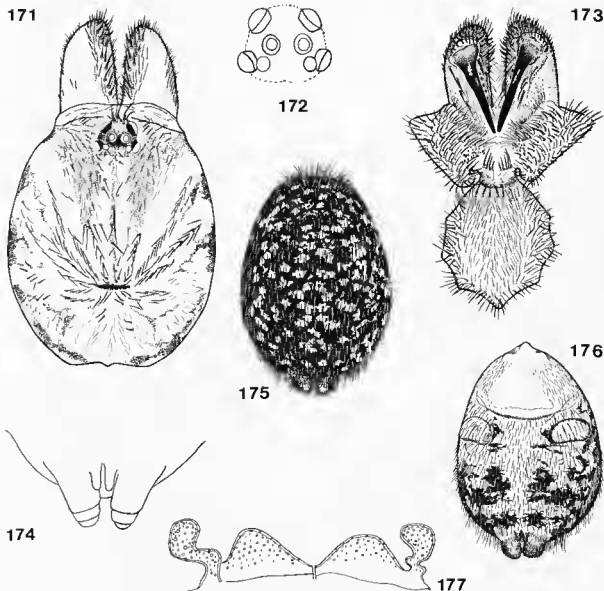
(figs 1 & 171-177; table 24)

**Type material** : holotype ♀ : Dent de St Vincent, st 318, rainforest, limite mousses, 1170 m, 166°12'59" E, 21°52'03" S, 5.VIII.1987 (A. & S. TILLIER, L. BONNET DE LARBOGNE, Y. LETO-CART), MNHN.

**Diagnosis** : maxillae with more than 13 cusplets on average of both. ♀. Paired claws of leg IV

with teeth. Basifemoral thorn setae absent. Precising combs present. Scopula almost absent on metatarsi IV; distal quarter of metatarsi III. Abdomen dorsally with fine white spots forming no pattern. Legs without annulations. Spermathecae two, each a lobe conical inner mound with outer sinuous lobe. ♂ unknown.

**Description** : holotype ♀. Carapace 5.86 long, 5.04 wide. Abdomen 6.67 long, 4.95 wide. Total length, 16. Colour in alcohol. Carapace red



FIGS 171-177. - *Encyoerypta tilleri* n. sp., holotype ♀. 171 : carapace and chelicerae, dorsal view; 172 : eye group, dorsal view; 173 : sternum, maxillae, labium, and chelicerae, ventral view; 174 : spinnerets, ventral view; 175, 176 : abdomen, dorsal view (175), ventral view (176); 177 : spermathecae, ventral view.

brown with darker reticulated markings on margins, in narrow bands on interstitial ridges and on caput; chelicerae and legs red brown. Abdomen dorsally brown with small irregular white mottling in no apparent pattern; ventrally pallid with extensive brown areas posteriorly.

Carapace. Fine black hairs on margins, along interstitial ridges, on caput; but not generally hirsute; hairs thicker beside anteromedial caput. Several fine short pairs of foveal bristles, none

long or distinct; 6 thick and numerous thinner bristles anteromedially; 6-10 long thick curved bristles between ALE. Fovea straight.

Eyes. Group is 0.29 of head-width. Back row almost straight. Eye group front width, back width, length, 42 : 51 : 37. MOQ front width, back width, length, 28 : 33 : 21. AME : ALE : PME : PLE, 13 : 16 : 9 : 15. AME-AME, 0.2, AME-ALE, 0.9, ALE-ALE, 1.5, PME-PLE, 0.6, PME-PME, 1.4, ALE-PLE, 1.0.

Chelicerae. Narrow, long, rounded. Prodorsally with bands of long curved bristles; finer bristles laterally. Rastellum of indistinct mound with 10-15 moderately thick curved bristles on inner corner. Furrow promargin with 10 large and small teeth, basomesally with 10 small teeth and ca. 10 granules.

Labium 1.22 wide, 0.45 long. Labiosternal suture is two separate sigilla in wide groove. Maxillae 1.76 long in front, 2.48 long behind, 1.26 wide; with about 23 cuspules in narrow band. Heel produced; anterior lobe indistinct. Sternum 3.83 long, 2.88 wide. Sigilla distinct, marginal; strongest setae along margin.

Legs. Basifemoral thorn setae absent. Scopula. Metatarsus and tarsus I, II, full, entire. Metatarsi III, thin, divided in distal quarter; IV, distal eighth, sparse. Tarsus: III, divided by wide band

of 6-8 setal lines; IV, similar but thinner and setal band wider. Claws. 3 teeth on paired claws, no teeth on palpal claw.

Spines. Leg I, fe p1, d6-8w, ti 0, me 0; leg 2, fe p1 d2w, pa 0, ti 0, me v1; leg 3, fe p1, d2, r1, pa p2, r1, ti p2, r2, v7, me p3, r3, v8; leg 4, fe r1, pa 0, ti r4, v8, me p3, r3, v9; palp, fe p1, d6w, pa 0, ti p2, v4. Preening combs strong, distinct, of 3-4 setae in retroventral III & IV.

Trichobothria in two rows, each of 8 for 3/4 on tibiae; about 12 in curving line on metatarsi; ca. 3 clavate proximally and 18 filiform on tarsi.

Spermathecae two, each a lobe conical inner mound with outer sinuous lobe.

Spinnerets. PMS 0.34 long, 0.16 wide, 0.11 apart, about 0.33 of basal PLS in diameter. PLS length of basal, middle, apical, and total articles 0.70, 0.27, 0.16, 1.13, respectively.

**Etymology:** the specific epithet is a patronym in honour of Dr Simon TILLIER, MNHN, whose cooperation, companionship, and collections have been invaluable in completing this study.

**Distribution and habitat:** *Encyocrypta tillieri* is known only from rainforest at Dent de St Vincent.

**Material examined:** only the type.

TABLE 24. — Leg measurements of *Encyocrypta tillieri*, holotype ♀

	I	II	III	IV	Palp
Femur	3.66	3.38	3.10	4.69	3.19
Patella	2.91	2.62	2.25	2.82	2.16
Tibia	2.82	2.62	1.97	3.66	2.25
Metatarsus	1.97	1.97	2.53	4.41	—
Tarsus	1.50	1.41	1.50	1.69	1.88
Total	12.86	12.00	11.35	17.27	9.48

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## REFERENCES

- AUSSERER, A., 1871. — Beiträge zur Kenntniss der Arachniden-Familie der Territelariae Thorell (Mygalidae Autor). *Verhandl. K. K. Zool.-Bot. Gesell. Wien*, **21** : 177-224.
- BIRLAND, L., 1924. — Araignées de la Nouvelle Calédonie et des îles Loyauté. In : SARASIN, F. & ROUX, J., *Nova Caledonia. Zoologie*, **3** (2). Berlin, C. W. Kreidel's Verlag : 159-255, 213 figs.
- BONNET, P., 1956. — *Bibliographia Araneorum*, **2** (2) : 919-1926.
- BRIGNOLI, P. M., 1983. — *A catalogue of the Araneae described between 1940 and 1981*. Manchester, British Arachnological Society : i-xii + 1-755.
- HOGG, H. R., 1902. — On Australian and New Zealand spiders of the suborder Mygalomorphae. *Proc. Zool. Soc. Lond.*, **1901-2** : 218-279.
- KOCH, L., 1873. — *Die Arachniden Australiens, nach der natur beschrieben und abgebildet*. Nürnberg, Bauer & Raspe : 369-472.
- KRITSCHER, E., 1966. — Ergebnisse der österreichischen Neukaledonien-Expedition 1965. Die Pedipalpen- und Araneenausbeute der Österreichischen Neukaledonien-Expedition 1965. *Ann. Naturhistor. Mus. Wien*, **69** : 373-391.
- MAIN, B. Y., 1954. — Spiders and Opiliones. In : The Archipelago of recherche. *Aust. geogr. Soc. Rep.*, **1** : 35-73.
- MAIN, B. Y., 1981. — Eco-evolutionary radiation of mygalomorph spiders in Australia. *Monographiae Biol.*, **41** (2) : 853-872.
- MAIN, B. Y., 1982. — Some zoogeographic considerations of families of spiders occurring in New Guinea. *Monographiae Biol.*, **42** (2) : 583-602.
- MAIN, B. Y., 1985. — Mygalomorphae. In : WALTON, D. W. (ed.), *Zoological Catalogue of Australia*, **3**. Arachnida : Mygalomorphae, Araneomorphae in part, Pseudoscorpionida, Amblypygi, and Palpigradi. Canberra, Australian Government Publishing Service : i-x + 1-183.
- POCOCK, R. I., 1895. — Notes on the Identity of some of the Types of Mygalomorphae in the Collection of the British Museum. *Ann. Mag. Nat. Hist.*, (6) **16** : 233-230.
- POCOCK, R. I., 1898. — Scorpions, Pedipalpi and Spiders from the Solomon Islands. *Ann. Mag. Nat. Hist.*, (7) **1** : 1-457.
- PLATNICK, N. I., 1989. — Advances in Spider Taxonomy 1981-1987 : A supplement to Brignoli's *A catalogue of the Araneae described between 1940 and 1981*. Manchester, Manchester University Press : i-vii + 1-673.
- RAINBOW, W. J., 1912. — A census of Australian Araneidae. *Rec. Austr. Mus.*, **9** : 107-319.
- RAVEN, R. J., 1981. — The mygalomorph spider genera *Phyxioschaema* Simon and *Steingrocerus* Simon (Dipluridae : Ischnothelinae). *Bull. Brit. Arach. Soc.*, **5** (5) : 225-231.
- RAVEN, R. J., 1984. — The Australian curtain-web spiders (Ischnothelinae : Dipluridae : Cheliceraata). *Aust. J. Zool. Suppl. Ser.*, **93** : 1-102.
- RAVEN, R. J., 1985. — The spider infraorder Mygalomorphae (Araneae) : cladistics and systematics. *Bull. Am. Mus. Nat. Hist.*, **182** : 1-180.
- ROEWER, C. F., 1942. — *Katalog der Araneae*. Bremen, Paul Budy Bd. : i-viii + 1-1040.
- SIMON, E., 1889. — Études arachnologiques. 21<sup>e</sup> Mémoire. XXXII - Descriptions d'espèces et de genres nouveaux de Nouvelle Calédonie. *Ann. Soc. ent. Fr.*, (6) **8** : 237-247.
- SIMON, E., 1892. — *Histoire Naturelle des Araignées*. Paris, Roret, **1** (1) : 1-256.
- SIMON, E., 1903. — *Histoire Naturelle des Araignées*. Paris, Roret, **2** (4) : 669-1080.
- WEBB, L. J., 1968. — Environmental relationships of the structural types of Australian rainforest vegetation. *Ecology*, **49** : 296-311.